#### WILLIAMS MULLEN

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January 20, 2017

## VIA Electronic and Certified Mail Return Receipt Requested

Fernando Rivera
Enforcement Project Manager, SECEB
Superfund Division
United States Environmental Protection Agency
61 Forsyth Street, SW
Atlanta, Georgia 30303-8909
Rivera.Fernando@epa.gov

Re: Burlington Cheraw Superfund Site

BGF Industries, Inc.

Dear Mr. Rivera:

We are writing to request the United States Environmental Protection Agency (EPA), Region 4, expand its inquiry into BGF Industries, Inc. ("BGF") as a potential responsible party (PRP) to the Burlington Cheraw Superfund Site ("Burlington Site"). In sum, we believe BGF's response to Section 104/Section 3007 Request for Information ("BGF Request") may not explain BGF's relationship to the release of PCBs onsite.

By letter dated November 9, 2016, EPA served the BGF Request seeking information on the release or threat of release of PCB at the Burlington Site and BGF's relationship to the Burlington Site. The November 30, 2016, response by BGF denies the company "has [any] known connection to the contamination associated with the Site" and "at no time conducted business operations or related activities at the [Burlington Site]." BGF Letter (November 30, 2016). EPA specifically asked BGF to "identify businesses with which it is related" that have used the property to "dispose, discard, deposit any materials or waste items"; BGF did not identify any business in its response related to the Burlington Site.

The BGF Response does not disclose BGF's corporate relationship to Burlington Industries, Inc., owner of the plant at the time PCB were used in textiles:

 Documents provided to EPA and the State of South Carolina document BGF purchased and today continues to operate the "Burlington Glass Fabrics Division" of Burlington Industries, Inc. as a successor-in-interest to Burlington Industries, Inc. [Attachment A

- (Purchase Agreement Only)], and Burlington Glass Fabrics Division operated at the Burlington Site when PCBs were disposed there prior to their use being banned by EPA January 1, 1982;
- BGF entered an Assumption Agreement with Burlington Industries, Inc., wherein it assumed the liability for Burlington Industries, Inc. for disposal of PCB (along with other toxic wastes) prior to 1988 [Attachment B]<sup>1</sup>;
- Highland notified BGF by letter dated October 4, 2016, of BGF's potential liability as a successor to Burlington's Glass Fabrics Division and owner/operator at the time of the release of PCB, providing BGF with correspondence about PCB disposal at Burlington Site and documenting the contamination there [Attachment C];
- BGF's legal counsel for the 104(e) BGF Response confirmed receipt of the October 4, 2016, letter and attachments by letter to Highland on October 6, 2016 [Attachment D];
- Highland also provided BGF with documentation on BGF's ownership to the Burlington Site as a successor to Burlington by a letter to BGF's lawyer on December 2, 2016 [Attachment E]; and
- It is not disputed Burlington Glass Fabrics Division operated and disposed of PCBs onsite.

Therefore, a claim by BGF it has "no known connection" to the Burlington Site, did "[not] conduct business [there]," and is not related to any business disposing of PCB at the Burlington Site is inconsistent with the record and misleading.

BGF is under a duty to accurately and completely answer the BGF Request and to supplement its responses as new information becomes available. *United States vs. Ponderosa Fibres of America, Inc.*, 178 F. Supp. 2d 157 (N.D.N.Y. 2001); *U.S. vs. Crown Roll Leaf, Inc.*, 888 F.2d 1382 (3d Cir. 1989)(district court imposing a fine against the defendant for failure to respond to 104 letter seeking information about predecessor's generation, handling, and disposal of hazardous waste at four sites)(emphasis added). This duty is reiterated in paragraph 3 of "Instructions" to the BGF Request. EPA enforcement of this requirement is necessary to the success of CERCLA. See *EPA's Transmittal of Guidance on Issuing CERCLA Section 104(e)(2) Information Requests to Federal Agencies at Privately-owned Superfund Sites* ("Demanding timely, complete and accurate responses to such requests from all PRPs is critical to EPA's enforcement fairness policy"); citing *EPA's Interim CERCLA Settlement Policy* (OSWER Directive Number 9835.0)(Dec. 5, 1984). A fair review of BGF corporate records suggests BGF did not disclose its relationship to the site as a successor, owner, or operator of which it had notice.

<sup>&</sup>lt;sup>1</sup> In order to better understand BGF's relationship to an assumption of liability for the Burlington Site, BGF corporate history must be considered. The enclosed documents and the documents provided to EPA in November of 2016 may assist in that regard.

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To fulfill EPA's policy of "enforcement fairness", we believe it is appropriate for EPA to request BGF supplement its responses after carefully reviewing documents within BGF possession and explain why the information was not included in the prior BGF Response. It would also be appropriate for EPA to request BGF explain its relationship to Burlington Industries, Inc., Burlington Holdings, Inc., Burlington Glass Fabrics Company, Porcher Industries, and International Textile Group, Inc. (ITG), all of which are PRPs to the Burlington Site.

Please do not hesitate to call if you have any questions. We appreciate your efforts to fully investigate corporate relationships to the Burlington Site.

Sincerely,
Williams Mullen

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Ethan R. Ware

cc: Gregory D. Luetscher, Esq.

ERW/jt

## ATTACHMENT A

PURCHASE AGREEMENT dated as of February 12, 1988, between BURLINGTON INDUSTRIES, INC., a Delaware corporation (the "Seller"), and PORCHER TEXTILE, a French société anonyme (the "Purchaser").

WHEREAS, the Seller, through its Burlington Glass Fabrics Company division ("Glass Fabrics"), is engaged in the business of manufacturing and selling glass, Kevlar(R) and Carbon fabrics and combinations thereof and insulating felts made from glass fibers;

WHEREAS, the Purchaser desires to acquire from the Seller, and the Seller desires to sell to the Purchaser, substantially all the business and assets of the Glass Fabrics division, subject to certain of the liabilities thereof, on the terms and subject to the conditions set forth in this Agreement;

NOW, THEREFORE, in consideration of the premises and of the mutual agreements and covenants hereinafter set forth, the parties hereto agree as follows:

# ARTICLE I : DEFINITIONS

SECTION 1.01. Certain Defined Terms. As used in this Agreement, the following terms shall have the following meanings:

- (a) [Intentionally Omitted.]
- (b) "Antitrust Division" means the Antitrust Division of the Department of Justice of the United States.
- (c) "Assumption Agreement" means the agreement to be entered into between the Seller and the Purchaser in the form attached hereto as Exhibit 1.01(c).
- "Audited Statement of Net Assets" has the meaning specified in Section 2.03(b)(i),
- (e) "Bill and Hold Inventories" has the meaning specified in Section 2.01(c)(v)

- International AG, a Swiss company. means Burlington
- and Burlington International, excluding any activities or functions not conducted by employees or independent contractors of Glass Fabrics or Burlington International, consisting of research and development with respect to, purchase activities with respect to, and the storage, processing, treating, manufacture, weaving, knitting, coating, finishing, servicing, marketing, sale, distribution, importation and exportation of, glass, Keylar(R) and carbon fabrics and combinations thereof and insulating felts made from glass fibers, conducted at the Facilities.
- (h) "Business Day" means a day of the year on which banks are not required or authorized to be closed in the City of New York.
- (i) "Closing Date" means the date specified in Section 2.05(a) on which the Closing (as defined in Section 2.05(a)) shall take place.
- (j) "Designated Rate" means the rate of interest announced publicly from time to time by Bankers Trust Company, in the City of New York, as such bank's prime lending rate, plus 2%.
- (k) "Disclosure Schedule" means the Disclosure Schedule dated as of the date hereof, delivered to the Purchaser by the Seller.
- (1) "Division Accounting Policies" means the Seller's divisional accounting policies as described in Section 1.01(1) of the Disclosure Schedule.
  - (m) "Effective Date" means January 2, 1988.
- (n) "Effective Time" means 12:01 a.m. on January 3, 1988.
- (o) "<u>ERISA</u>" means the Employee Retirement Income Security Act of 1974, as amended.
- (p) "Excluded Assets" has the meaning specified in Section 2.01(c).
- (q) "<u>Facilities</u>" means the facilities of the Seller that are set forth in Section 1.01(q) of the Disclosure Schedule.

- entered into between the Seller and the Purchaser in the form attached hereto as Exhibit 1.01(r).
  - (s) "FTC" means the Federal Trade Commission.
- (t) "HSR Act" means the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended.
- Section 1.01(aa).
- (v) "Intellectual Property Agreements" means the agreements to be entered into between the Seller and the Purchaser in the forms attached hereto as Exhibits 1.01(v)(i) and 1.01(v)(ii).
- (w) "Internal Revenue Code" means the Internal Revenue Code of 1986, as amended.
- (x) "Land" has the meaning specified in Section
  1.01(aa).
- (y) "Material Adverse Effect" means any change in, or effect on, the Business as currently conducted by the Seller that is or is reasonably likely to be (either individually or, with respect to all closely related conditions or occurrences, in the aggregate) materially adverse to the Business or the results of operations or financial condition of the Business, after giving effect to this Agreement.
- (z) "Permitted Exceptions" shall mean (i) (except as limited by clauses (A), (B) or (C) below) those encumbrances disclosed in Section 3.07 of the Disclosure Schedule, (ii) liens for Taxes and assessments not yet due and payable; (iii) liens for Taxes, assessments and charges and other claims, the validity of which the Seller is contesting in good faith, and (iv) imperfections of title, liens, security interests, claims and other charges and encumbrances, except, with respect to items referred to in clauses (i) and (iv) above, those the existence of which (A) would be or be likely to be materially adverse to the Business, as currently conducted by the Seller or Burlington International or (B) that would be or be reasonably likely to be materially adverse to the Business or the results of operations or financial condition of the Business, after giving effect to this Agreement or (C) that would materially impair or be reasonably likely to materially

#### ARTICLE II

#### PURCHASE AND SALE

SECTION 2.01. Purchase and Sale. (a) On the terms and subject to the conditions set forth in this Agreement, the Seller agrees to sell, assign, transfer, convey and deliver to the Purchaser, or cause to be sold, assigned, transferred, conveyed and delivered to the Purchaser, and the Purchaser agrees to purchase and accept from the Seller, on the Closing Date, the Business, as it shall exist on the Closing Date.

- (b) The assets; goodwill and business of the Seller Constituting the Business to be transferred to the Purchaser (the "Assets") are as follows:
  - (i) the Real Property and interests in real property described in items (1)-(4) of Section 1.01(aa) of the Disclosure Schedule, together with all buildings, facilities and other improvements located on such real property, together with such additions thereto and deletions therefrom as shall have occurred in the ordinary course of business after the date hereof and prior to the Closing Date;
  - (ii) all the machinery and equipment, furniture, fixtures and other similar property located at the Facilities or listed in Section 2.01(b)(ii) of the Disclosure Schedule, together with such additions thereto and deletions therefrom as shall have occurred in the ordinary course of business after the date hereof and prior to the Closing Date, owned by the Seller on the Closing Date;
  - (iii) all inventories of raw materials, work in progress and finished goods, stores, replacement and spare parts, packaging materials, operating supplies, and fuels, dyes and chemicals located at the Facilities or in transit, owned by the Seller and used exclusively in the Business on the Closing Date;
  - (iv) all accounts receivable arising out of the Business, owned by the Seller on the Closing Date;
  - (v) all the Seller's rights in, to and under all domestic and foreign patents, patent applications, patent licenses, assignable software licenses, assignable know-how licenses, trade names (other than the name)

- (x) all general, financial and personnel records (other than medical records), correspondence and other files and records of the Seller customarily located at the Facilities and any other files and records of the Seller pertaining solely to the Business, wherever located on the Closing Date;
- (xi) all claims, causes of action, choses in action, rights of recovery and rights of set-off of any kind pertaining solely to, and arising solely out of, the Business as in existence on the Closing Date;
- (xii) all the Seller's goodwill in the Business, as the same shall exist on the Closing Date; and
- (xiii) prepaid items relating exclusively to the Business, prorated as appropriate, listed on a schedule to be delivered to the Purchaser at the Closing.
- (c) The following (the "Excluded Assets") are specifically excepted from the Assets to be transferred to the Purchaser pursuant to Section 2.01(b):
  - (i) all cash and marketable securities (it being understood that the accounts receivable referred to in Section 2.01(b)(iv), however evidenced, shall not be considered securities);
  - (ii) all insurance policies of the Seller pertaining to the Business and all rights of the Seller of every nature and description under or arising out of such insurance policies;
  - (iii) the name "Burlington" or any derivative thereof or the Burlington corporate weave logo;
  - (iv) claims for refunds of Taxes paid by the Seller imposed on property, income or payrolls arising prior to the Closing Date;
  - (v) "Bill and Hold" inventories on hand at the Effective Date that were previously billed for the Seller's account and held for later shipment to customers (the "Bill and Hold Inventories"); and
  - (vi) all rights of the Seller under this Agreement and the agreements and instruments delivered to the Seller by the Purchaser pursuant to this Agreement.

SECTION 2.02. Assumption of Limbilities by the Purchaser. On the terms and subject to the conditions set

forth in this Agreement, the Purchaser shall execute and deliver the Assumption Agreement to the Seller on the Closing

Adjustments to Purchase Price. (a) The total consideration shall be equal to the sum of \$10,000,000 paid for the covenant not to compete referred to in Section 5.17 and the purchase price for the Business (the "Purchase Price"). The Purchase Price shall be the sum of (x) \$117,600,000 and (y) an amount equal to the interest that would accrue on \$127,600,000 at the Designated Rate, calculated from the Effective Date through the Closing Date. The Purchase Price shall be allocated among the Assets in accordance with Exhibit 2.03(a) with appropriate adjustment for changes in the ordinary course of business from the Effective Date to the Closing Date, which allocation shall be binding on all parties for Federal income tax purposes.

- (b) The Purchase Price shall be subject to adjustment after the Closing Date as specified in this Section 2\_03(b).
  - (i) Audited Statement of Net Assets. As soon as practicable, but in any event within 60 days following the Closing Date, the Seller shall deliver to the Purchaser an audited statement of net assets of the Business to be acquired pursuant to this Agreement (the "Audited Statement of Net Assets"), as of the Effective Date, together with a report thereon of Arthur Young & Company, independent accountants for the Seller ("Seller's Accountants"), stating that the Audited Statement of Net Assets fairly presents the net assets of the Business to be acquired as of the Effective Date in accordance with the Division Accounting Policies.
  - (ii) Cooperation. During the preparation of the Audited Statement of Net Assets by the Seller and the period of any dispute referred to in Section 2.03(b)(iv), the Purchaser shall provide Seller's Accountants full access to the books; records, facilities and employees of the Business and shall cooperate fully with Seller's Accountants, in each case to the extent required by Seller's Accountants in order to prepare the Audited Statement of Net Assets and to investigate the basis for any such dispute; provided, however, that (A) any such investigation shall be conducted in such a manner as not to interfere unreasonably with the operation of the Business, and (B) the Purchaser shall not be required to supply the Seller with any information which the

Purchaser is under a legal obligation not to supply. Employees of the Purchaser and its independent public accountants shall be entitled to access to Seller's Accountants' work papers prepared in connection with the Audited Statement of Net Assets and shall be entitled to discuss such work papers with Seller's Accountants.

- (iii) Adjustment of Purchase Price. Subject to the limitation set forth in Section 2.03(b)(iv)(D), within 30 Business Days after the date of receipt by the Purchaser of the Audited Statement of Net Assets:
  - (A) in the event that the Book Value (as hereinafter defined) of the Business set forth on the Unaudited Statement of Net Assets exceeds the Book Value of the Business set forth on the Audited Statement of Net Assets by at least the Designated Amount (as hereinafter defined), the Seller shall pay to the Purchaser, as an adjustment to the Purchase Price, in immediately available funds, an amount equal to such excess over the Designated Amount;
  - (B) in the event that the Book Value of the Business set forth on the Audited Statement of Net Assets exceeds the Book Value of the Business set forth on the Unaudited Statement of Net Assets by at least the Designated Amount, the Purchaser shall pay to the Seller, as an adjustment to the Purchase Price, in immediately available funds, an amount equal to such excess over the Designated Amount; and
  - (C) for purposes of this Section 2.03, "Book Value" means the total net assets reflected on the Unaudited Statement of Net Assets or the Audited Statement of Net Assets, as the case may be.

### (iv) Disputes

- (A) Subject to Section 2:03(b)(iv)(B), the Audited Statement of Net Assets delivered by the Seller to the Purchaser shall be final, binding and conclusive on the parties hereto.
- (B) The Purchaser may dispute any amounts reflected on the Audited Statement of Net Assets to the extent that the net effect of such disputed amounts in the aggregate would be to reduce the aggregate Book Value by more than the Designated Amount, but only on the basis that the Audited

Statement of Net Assets does not present fairly the net assets of the Business to be acquired as of the Effective Date in accordance with the Division Accounting Policies; provided, however, that the Purchaser shall notify Seller's Accountants in writing of each disputed item, specifying the amount thereof in dispute and setting forth, in detail, the basis for such dispute, within 30 Business Days of the Purchaser's receipt of the Audited Statement of Net Assets. In the event of such a dispute, Peat Marwick Main & Co. ("Purchaser's Accountants") and Seller's Accountants shall attempt to reconcile their differences and any resolution by them as to any disputed amounts shall be final, binding and conclusive on the parties. If any such resolution by Purchaser's Accountants and Seller's Accountants leaves in dispute amounts the net effect of which in the aggregate would not be to reduce the aggregate Book Value reflected on the Audited Statement of Net Assets by at least the Designated Amount, all such amounts remaining in dispute shall then be deemed to have been resolved in favor of the Audited Statement of Net Assets. If Purchaser's Accountants and Seller's Accountants are unable to reach a resolution with such effect within 10 Business Days of the Purchaser's written notice of dispute to Seller's Accountants, the Purchaser and Seller's Accountants shall submit the items remaining in dispute for resolution to an independent accounting firm of national reputation mutually appointed by the Seller and the Purchaser (the "Independent Accounting Firm\*), which shall, within 20 Business Days of such submission, determine and report to the Seller and the Purchaser upon such remaining disputed items, and such report shall be final, binding and conclusive on the Seller and the Purchaser. The fees and disbursements of the Independent Accounting Firm shall be allocated between the Purchaser and the Seller in the same proportion that the aggregate amount of such remaining disputed items so submitted to the Independent Accounting Firm that is unsuccessfully disputed by each (as finally determined by the Independent Accounting Firm) bears to the total amount of such remaining disputed items so submitted.

(C) No adjustment to any amount payable by the Seller or the Purchaser pursuant to Section 2.03(b)(iii) shall be made with respect to amounts disputed by the Purchaser pursuant to this Section

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payable and prepaid and accrued expenses of the Business, determined in accordance with the Division Accounting Policies, but excluding cash and cash equivalents and tax expense; and (v) "Cash Settlement Amount" means the sum of (A) the aggregate net earnings of the Business for the period commencing at the Effective Time and ending on the Closing Date and (B) the aggregate depreciation and amortization expense of the Business for such period, less any increase or, as the case may be, plus any decrease, in working capital of the Business between the beginning and the end of such period, less the aggregate net capital expenditures of the Business for such period.

- (c) During the preparation of the Audited Statement of Net Earnings and the Cash Settlement Amount Statement by the Seller and the period of any dispute referred to in subsection (e) of this Section 2.04, the Purchaser shall provide Seller's Accountants full access to the books, records, facilities and employees of the Business, and shall Cooperate fully with Seller's Accountants, in each case to the extent required by Seller's Accountants in order to prepare the Audited Statement of Net Earnings and the Cash Settlement Amount Statement or to investigate the basis for any such dispute; provided, however, that (i) any such investigation shall be conducted in such a manner as not to interfere unreasonably with the operation of the Business, and (ii) the Purchaser need not supply the Seller with any information which the Purchaser is under a legal obligation not to supply. Employees of the Purchaser and its independent public accountants shall be entitled to access to Seller's Accountants' work papers prepared in connection with the Audited Statement of Net Earnings and shall be entitled to discuss such work papers with Seller's Accountants:
- (d) Subject to the limitation set forth in subsection (e)(iv) of this Section 2.04, within 30 Business Days after the date of receipt by the Purchaser of the Audited Statement of Net Earnings and the Cash Settlement Amount Statement, the Seller shall pay to the Purchaser, as an adjustment to the Purchase Price an amount equal to the Cash Settlement Amount.
- (e) (i) Subject to Section 2:04(e)(iv), the Audited Statement of Net Earnings and the Cash Settlement Amount Statement delivered by the Seller to the Purchaser shall be final, binding and conclusive on the parties hereto
- (ii) The Purchaser may dispute any amounts reflected on the Audited Statement of Net Earnings and the Cash Settlement Amount Statement, to the extent that the net

effect of such disputed amounts in the aggregate would be to increase the amount of net earnings of the Business or the Cash Settlement Amount by more than \$500,000, but only on the basis that, in the case of the Audited Statement of Net Earnings, such statement does not present fairly the results of operations. of operations of the Business for the period commencing at the Effective Time, and ending on the Closing Date, in accordance with the Division Accounting Policies, or, in the Case of the Cash Settlement Amount Statement, such statement was not prepared in accordance with this Section 2.04; provided, however, that the Purchaser shall notify Seller's Accountants in writing of each disputed item, specifying the amount thereof in dispute and setting forth, in reasonable detail, the basis for such dispute, within 30 Business Days of Purchaser's receipt of the Audited Statement of Net Earnings and the Cash Settlement Amount Statement. In the event of such a dispute, Purchaser's Accountants and Seller's Accountants shall attempt to reconcile their differences and any resolution by them as to any disputed amounts shall be final, binding and conclusive on the parties. If any such resolution by Purchaser's Accountants and Seller's Accountants leaves in dispute amounts the net effect of which in the aggregate would not increase the aggregate net earnings of the Business for such period or the Cash Settlement Amount by at least \$500,000, all such amounts remaining in dispute shall then be deemed to have been resolved in favor of the Audited Statement of Net Earnings and the Cash Settlement Amount Statement as delivered by the Seller to the Purchaser. If Purchaser's Accountants and Seller's Accountants are unable to reach a resolution with such effect within 10 Business Days of Purchaser's Accountants' written notice of dispute to Seller's Accountants, Purchaser's Accountants and Seller's Accountants shall submit the items remaining in dispute for resolution to the Independent Accounting Firm, which shall, within 20 Business Days after submission, determine and report to the parties upon such remaining disputed items, and such report shall be final, binding and conclusive on the parties The fees and disbursements of the Independent Accounting Firm shall be allocated between the Purchaser, on the one hand, and the Seller, on the other hand, in the same proportion that the aggregate amount of such remaining disputed items so submitted to the Independent Accounting Firm that is unsuccessfully disputed by each (as finally determined by the Independent Accounting Firm) bears to the total amount of such remaining disputed items so submitted

(iii) No adjustment to any amount payable by the Seller pursuant to subsection (d) of this Section 2.04 shall be made with respect to amounts disputed by the Purchaser

pursuant to subsection (e) of this Section 2.04 unless the net effect of the amounts successfully disputed by the Purchaser in the aggregate increases the amount of net earnings of the Business for such period or the Cash Settlement Amount by at least \$500,000, in which case such adjustment shall only be made in an amount equal to any excess over \$500,000.

this Section 2.04 shall be paid by the Seller within five Business Days following the resolution of such dispute and in an amount in accordance with such resolution.

SECTION 2.05. Closing. (a) Subject to the terms and conditions of this Agreement, the sale and purchase of the Business contemplated hereby shall take place at a closing (the "Closing") at 10:00 a.m., local time, on the first Monday falling on a date not less than two Business Days following the expiration or termination of the applicable waiting periods under the HSR Act, at the offices of Shearman & Sterling, 599 Lexington Avenue, New York, New York, or at such other time or on such other date or at such other place as the Seller and the Purchaser may mutually agree upon in writing. Notwithstanding the provisions of Sections 2:03(b) and 2.04, such sale and purchase of the Business shall be deemed for all purposes to have taken place as of the Closing Date:

(b) At the Closing, the Seller shall deliver to the Purchaser: (i) a Bill of Sale and Assignment substantially in the form attached hereto as Exhibit 2.05(b)(i) and (ii) deeds for the Land and Improvements that are customary for the location at which the Land and Improvements are situated taking into consideration all relevant factors, including the nature of the "deeds-in".

(c) At the Closing, the Purchaser shall deliver to the Seller the sum of (x) the Purchase Price and (y) the \$10 million referred to in Section 2.03(a) paid for the covenant to not compete referred to in Section 5.17 by wire transfer in immediately available funds, to an account or accounts designated at least one Business Day prior to the Closing Date, by the Seller in a written notice to the Purchaser.

#### ARTICLE III

#### REPRESENTATIONS AND WARRANTIES OF THE SELLER

as follows:

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SECTION 3.01. Organization and Authority of the Seller. The Seller is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has all necessary corporate power and authority to enter into this Agreement and to consummate the transactions contemplated hereby. This Agreement has been duly authorized, executed and delivered by the Seller and constitutes a legal, valid and binding obligation of the Seller enforceable against the Seller in accordance with its terms.

SECTION 3.02. Organization of Builington International. Burlington International is a company duly organized, validly existing and in good standing under the laws of the Canton of Basel, Switzerland and has the corporate power and authority to own, operate or lease its properties and assets and to carry on its business as now being conducted. Burlington International is a company registered under the Companies Act, Part 23, of the United Kingdom.

International. At the time of the Closing, the Burlington International Shares will constitute all the authorized, issued and outstanding shares of capital stock of Burlington International. The Burlington International Shares have been duly authorized and validly issued and are fully paid and nonassessable. There are no options, warrants or rights of conversion or other rights, agreements, arrangements or commitments relating to the capital stock of Burlington International obligating Burlington International or the Seller to issue or sell any shares of capital stock of, or other equity interests in, Burlington International.

SECTION 3.04. <u>No Conflict</u>. Assuming all consents, approvals, authorizations and other actions listed in Section 3.12 of the Disclosure Schedule have been obtained and all filings and notifications listed in such section of the Disclosure Schedule have been made, the execution, delivery and performance of this Agreement by the Seller do not and will not (i) conflict with or violate any material law, rule, regulation, order, writ, judgment, injunction, decree

determination or award applicable to the Seller or Burlington International, (ii) conflict with or violate any material law, rule, regulation, order, writ, judgment, injunction, decree, detaching and order, writ, judgment, injunction, decree, determination or award applicable to the Business or by which any of the Assets are bound or affected in any material respect, (iii) violate or conflict with the Certificate of incorporation or by-laws of the Seller or Burlington International, or (iv) except as described in Section 3.04 of the Disclosure Schedule, result in any material breach of, or constitute a material default (or event which with notice or lapse of time, or both, would become a material default) under, or result in the creation of any material lien or other material encumbrance on any of the Assets pursuant to, any note, bond, mortgage, indenture, contract, agreement, lease, license, permit, franchise or other instrument relating to the Business to which the Seller or Burlington International is a party or by which any of the Assets is bound or affected.

SECTION 3.05. Litigation. Except as set forth in Section 3.05 of the Disclosure Schedule, there are no material claims, actions, proceedings or investigations pending or, to the best knowledge of the Seller, threatened against the Business, before any court; arbitrator, or administrative, governmental or regulatory authority or body. Neither the Business nor any of the Assets is subject to any material order, writ, judgment, injunction, decree, determination or award.

SECTION 3.06. Licenses and Permits. To the best knowledge of the Seller, each of the Seller and Burlington International has all material governmental licenses, permits and authorizations necessary to carry on the Business as currently conducted (including, without limitation, all necessary governmental licenses, permits and authorizations covering environmental and health and safety matters). Section 3.06 of the Disclosure Schedule contains a list of all such licenses, permits and authorizations so held.

SECTION 3.07. Properties: (a) All the Assets, other than Real Property, purported to be owned by the Seller, and assets purported to be owned by Burlington International, are so owned, free and clear of all liens, security interests, claims and other charges and encumbrances except Permitted Exceptions:

(b) Except as set forth in Schedule 3.07 of the Disclosure Schedule, each of Seller and Burlington International has, or on the Closing Date will have, and upon Closing the Purchaser shall receive, free and clear of all

mortgages, security interests, liens, deeds of trust, easements, pledges, charges, claims or encumbrances of any kind, except Permitted Exceptions, good and marketable fee simple title to the Real Property and all real property, if any, of Burlington International; and the Facilities listed in items (i) - (iv) of Section 1.01(g) of the Disclosure Schedule are located within the boundaries of the Land.

- (c) Except as set forth in Section 3.07 of the Disclosure Schedule, none of the Seller or Burlington International has assigned any of its interests under any lease included in the Assets or subleased the premises demised thereby.
- (d) Each of the separate parcels comprising the Land, and all land of Burlington International, has free and uninterrupted access to and from a dedicated public right-of-way by reason of the fact that such parcel either (i) adjoins such dedicated public right-of-way or (ii) connects to such dedicated public right-of-way through a valid and subsisting ingress and egress easement or through other parcels of Land or such land.
- (e) None of the Seller or Burlington International has received from any governmental authority or political subdivision thereof any notice of any currently proposed public improvement that would impose a material lien upon, or may materially adversely affect use of, any of the Real Property or any real property of Burlington International.
- (f) None of the Seller or Burlington International has received official notice of any plan to modify or realign any street or highway or any eminent domain proceeding that would result in the taking of all or any material part of any parcel constituting part of the Real Property or that may materially adversely affect the current use of any parcel constituting part of the Real Property.
- Date will have, free and clear of all mortgages, security interests, liens, deeds of trust, servitudes, easements, pledges, charges, claims or encumbrances of any kind except the Permitted Exceptions, all of the following: the full, complete, valid, and subsisting leasehold interest of the lessee under all leases referred to in Section 1:01(q) of the Disclosure Schedule (the "Operating Leases"), in and to the real property covered by the Operating Leases and all other rights and interests of the lessees under the Operating Leases, including, without limitation, any prepaid rent, security deposits and options to renew or purchase

thereunder, if any, and subject only to the respective respect to the Operating Leases. With effect, and Burlington International has not received any notice of cancellation or termination under any option or right reserved by the lessor under any Operating Lease or any occurred which, with notice or lapse of time or both, would as set forth in Section 3.07 of the Disclosure Schedule, under any Operating Lease. Except Burlington International has assigned any of its interests thereby.

SECTION 3.08. Machinery and Equipment. All the material machinery and equipment owned by the Seller and Burlington International and sold and transferred hereunder shall, on the Closing Date and except as reflected on the Audited Statement of Net Assets or Section 3.08 of the Disclosure Schedule, be in normal operating condition, reasonable wear—and—tear excepted, and fit for the operation of the Business in the ordinary course of business.

SECTION 3.09. Accounts Receivable. All accounts receivable owned by the Seller and Burlington International (net of any reserve therefor) that are sold and assigned to the Purchaser pursuant hereto and that arise from the Business are bona fide receivables arising in the ordinary course of business.

SECTION 3.10. Intellectual Property. (a) 3.10 of the Disclosure Schedule separately sets forth or describes all intellectual property rights currently used in the Business that are to be transferred to the Purchaser and contains a list of all patents (with descriptions), pending or submitted patent applications, trademarks, if any, trade names and service marks; all trademark (other than BURLGLAS). trade name and service mark registrations and applications; all copyright registrations and applications therefor; all registered user entries and applications; all copyright registrations and applications for registration, if any, which are owned or used exclusively by either of the Seller or Burlington International in connection with the Business. Except for the intellectual property rights licensed to the Seller by Firesafe Products Corporation under the agreements listed in such Schedule, there are no patent, trade secret. trade name, trademark or copyright licenses, rights franchises or similar contracts that will require the payment or receipt by the Purchaser of any royalties or fees related to, or based upon, the patents or intangible unpatented

proprietary rights included in such intellectual property rights.

Disclosure Schedule, there are no licenses or sublicenses of intellectual property rights to be transferred to the Purchaser and no other party has any material right or as set forth in Section 3.10 of the Disclosure Schedule, there is no material conflict known to the Seller with the rights of others, and the Seller has received no notice of any material claim of material infringement, with respect to any such intellectual property right or with respect to any such intellectual property right or with respect to any license of intellectual property relating to the Assets or the Business under which any of them is licensor or licensee.

SECTION 3.11. Contracts. Except as set forth in Section 2.01(b)(vii) of the Disclosure Schedule, as of the date of the execution of this Agreement, there are no Contracts of the Seller or Burlington International relating solely to the Business other than the Contracts to be assigned to the Purchaser pursuant to this Agreement; all the material Contracts are in full force and effect, in all material respects; the other contracting party under each has not given any (i) notice of cancellation or termination under any right reserved to the other contracting party under any such material Contract, except for any thereof that would not affect the Business in a material respect, and, except as set forth in Section 3.11 of the Disclosure Schedule, no event has occurred which, with notice or lapse of time or both, would constitute a material default under any such material Contract, except for any thereof that would not affect the Business in a material respect. To the knowledge of the general counsel of the Seller, Glass Fabrics and Burlington International possess no information currently classified as secret by the U.S. government and obtained in connection with any government contracts or government subcontracts.

execution and delivery of this Agreement by the Seller do not, and the performance of this Agreement by the Seller will not, require any consent, approval, authorization or other action by, or filing with or notification to, any governmental or regulatory authority, except (i) the notification to be filed with the FTC and the Antitrust Division pursuant to the HSR Act and the rules promulgated pursuant thereto and the expiration of the applicable waiting periods under the HSR Act, (ii) as described in Section 3.12 of the Disclosure Schedule and (iii) where failure to obtain

make such filings or notifications, would not prevent the Seller from performing any of its material obligations under this Agreement and would not affect the Business in any material respect.

party to any collective bargaining agreement or other labor union contract applicable to persons employed by it in connection with the operation of the Business and there are no strikes, slowdowns, work stoppages or lockouts, by or with respect to any employees of the Seller in connection with the operation of the Business, except for slowdowns and work stoppages the existence of which would not affect the Business in any material respect. The Seller knows of no material current activities or proceedings of any labor union (or representatives thereof) to organize any employees of the Business.

SECTION 3.14. Compliance with Laws. Except as set forth in Section 3.14 of the Disclosure Schedule, to the best knowledge of the Seller, on the Closing Date, the Seller shall be in substantial compliance with all, and shall have received no notice with respect to any material violation of any, applicable laws, regulations, orders or permits with respect to the operation of the Business (including, without limitation, laws, regulations, orders and permits concerning environmental, and health and safety matters), except where the failure to comply, or for violations the existence of which, would not affect the Business in any material respect.

SECTION 3.15. Financial Information. The unaudited statement of net assets of Glass Fabrics at October 3, 1987, attached hereto as Exhibit 3.15(a) (the "October Statement"), has been prepared, in all material respects, in accordance with Division Accounting Policies. The unaudited statement of net assets of the Business as of the Effective Date, attached hereto as Exhibit 3.15 (the "Unaudited Statement of Net Assets") fairly presents, in all material respects, the net assets of the Business to be acquired as of such date and has been prepared in accordance with the Division Accounting Policies. The Division Accounting Policies used in the preparation of each of the October Statement and the Unaudited Statement of Net Assets were applied in a consistent manner.

SECTION 3.16. Taxes. Except as set forth in Section 3.16 of the Disclosure Schedule, (i) Burlington International has timely filed or been included in, or will

timely file or be included in, all returns and reports required to be filed by it or in which it is to be included with reacher the fore the with respect to Taxes for any period ending on or before the Closing Date, taking into account any extension of time to file granted to or obtained on behalf of Burlington International (collectively, the "Returns"); (ii) Burlington International has paid, or will pay, all Taxes shown to be payable by the Returns; (iii) Burlington International has paid or will pay all Taxes, Tax assessments and Tax deficiencies that are due, or that will become due with respect to periods ending on or before the Closing Date, under applicable law; (iv) there are no currently effective waivers of any statute of limitations with respect to Burlington International or agreements to any extension of time with respect to any Tax assessments or deficiency with respect Burlington International; (v) there are no tax liens imposed by any Federal, state, local or foreign authority outstanding against any of the Assets of the Seller or assets of Burlington International; (vi) on the Closing Date, Burlington International will not be a party to any formal tax sharing agreement; (vii) Burlington International is not the subject of any pending tax audit or examination; (viii) Burlington International has not been notified by any tax authority that it is to be the subject of an impending tax audit; and (ix) Seller has timely filed or will timely file all reports or returns concerning payroll, withholding and other employment taxes that are required for any period ending on or before the Closing Date with respect to employees of the Business and has paid or will pay all Taxes shown due on such reports or returns.

SECTION 3.17. Assets Sold. The assets to be sold and transferred, or licensed, to the Purchaser pursuant to this Agreement will comprise all the material assets used in the Business as conducted on the Closing Date, except (i) the Excluded Assets, (ii) any asset that could be utilized in providing corporate overhead services to the Business or (iii) any asset not transferable by its terms or as a matter of law.

set forth in Section 3.18. Absence of Catastrophe. Except as set forth in Section 3.18 of the Disclosure Schedule, between the Effective Date and the date of execution of this Agreement, there has not been any damage or destruction of property of the Business by fire or other catastrophe that is material to the Assets or the Business, including any damage or destruction of property by fire or other catastrophe involving loss in excess of \$100,000 in the aggregate, which is not covered by insurance. There has been no material interruption in the Seller's or Burlington International's

use or operation of the Assets or any of Burlington International's properties or assets caused by any casualty.

SECTION 3.19. Inventory. All the inventories of the Business have been classified in accordance with Division Accounting Policies.

SECTION 3.20. No Sale or Transfer of Assets. Except as disclosed in Section 3.20 of the Disclosure Schedule, between the Effective Time and the execution of this Agreement, the Seller and Burlington International have not sold, leased, transferred or conveyed to any third party any assets forming part of the Assets or the Business that are reflected on the Unaudited Statement of Net Assets, other than in the ordinary course of business.

SECTION 3.21. Absence of Change. Except as disclosed in Section 3.21 of the Disclosure Schedule, between the Effective Date and the execution of this Agreement:

- (a) there has been no failure on the part of the Seller or Burlington International to operate the Business in the ordinary course so as to preserve the Business, or to use their best efforts to keep available the services, supply and relationship of Business personnel, customers, suppliers and others having business relations with the Business; and
- (b) except as disclosed in Section 3.21 of the Disclosure Schedule, no material supplier, customer, insurance carrier or other material third party having a business relationship with the Seller or Burlington International in connection with the Business has given written notice of permanent cancellation or termination of their business relationship, and no material agent, key employee or independent contractor of any of them has given notice of permanent termination of his engagement in connection with the Business.
- payable or to become payable generally by the Seller or Burlington International to the employees of the Seller engaged in the Business except for increases in salary or wages of its employees in accordance with past practices, or any grant of any severance or termination pay to (except as may be required by existing arrangements), or any entry into any employment or severance agreement with, any employee of the Seller or Burlington International engaged in the Business or the establishment, adoption, entry into or amendment of any collective bargaining agreement, with respect to any employees of the Seller or Burlington International engaged

in the Business, or any amendment of any employee, retirement, profit sharing or other benefit plan of the Seller or Burlington International.

SECTION 3.22. Certain Liabilities. Neither the Seller nor Burlington International has any knowledge of any material liabilities or obligations (whether accrued, absolute, contingent or otherwise) pertaining to the Business, except (i) as set forth in Section 3.22 of the Disclosure Schedule, (ii) as, and to the extent, reflected or reserved against in the Audited Statement of Net Assets, (iii) with respect to matters disclosed in the Disclosure Schedule or excluded from the coverage of any of the representations, warranties or covenants herein, (iv) the matters addressed in Article VII (which shall be governed solely by the terms of such Article VII, (v) under the laws of any jurisdiction, except for violations of any such laws that would affect the Business in any material respect, (vi) under any Contract, (vii) under this Agreement or any document entered into in connection herewith or (viii) that are incurred in the ordinary course of business after the Effective Date and prior to the Closing.

SECTION 3.23. Prokers. Except for Morgan Stanley & Co. Incorporated ("Morgan Stanley"), no broker, finder or investment banker is entitled to any brokerage, finder's or other fee or commission in connection with the transactions contemplated by this Agreement based upon arrangements made by or on behalf of the Seller. The Seller is solely responsible for the fees and expenses of Morgan Stanley.

#### ARTICLE IV

## REPRESENTATIONS AND WARRANTIES OF THE PURCHASER

Purchaser. The Purchaser is a societe anonyme duly organized, validly existing and in good standing under the laws of the Republic of France and has all necessary corporate power and authority to enter into this Agreement and to consummate the transactions contemplated hereby. This Agreement has been duly authorized, executed and delivered by the Purchaser and constitutes a legal, valid and binding obligation of the Purchaser enforceable against the Purchaser in accordance with its terms.

SECTION 4:02. <u>No Conflict</u>. The execution, delivery and performance of this Agreement by the Purchaser do not and

will not (i) conflict with or violate any material law, rule, order, writ, judament, injunction, decree, regulation, conflict with or violate any material law determination or award applicable to the purchaser or h regulation, order, writ, independent, injunction, decree, which any of its properties are bound or affected, (ii) which any of its properties are bound or affected, (ii) with the Certificate of incorporation which any of its properties are bound or affected, (11) by-laws of the purchaser, or (iii) to the best knowledge of by-laws of conflict with the Certificate of incorporation or the Purchaser, or (iii) to the best knowledge of new material breach of, or the Purchaser, or (iii) to the best know. Constitute a material default (or event which with i constitute a material default (or event which with notice or both would become a material default) under, Constitute a material default (or event which with notice or or result in the both would become a material default) under, encumbrance on any of the properties or assets of the or result in the creation of any material lien or other encumbrance on any of the properties or assets of the contract, agreement, lease, license, permit, franchise or contract, pursuant to any note, bond, mortgage, indenture, other instrument to which the Purchaser or any of its other instrument, lease license, permit, franchise subsidiaries is a party or by which any of its or their Subsidiaries is a party or by which any of its or their bound or affected, which would Subsidiaries is a party or by which any of its or their a material adverse is bound or affected, which would have transactions contemplated hereby. transactions contemplated hereby.

action, SECTION 4.03. Absence of Litigation. No Claim, best knowledge of the Physikaser Mineatened, which seeks t best knowledge of investigation is pending or, to the delay of prevent the Consummation of the transactions delay or prevent the Purchaser, threatened, which see Contemplated herein Consummation of the transactions Contemplated hereby

execution and delivery of this Agreement by the Purchaser do execution and delivery of this Agreement by the Purchaser of the Polichaser of the P notification to be filed with the FIC and the Antitiust Division pursuant to the HSR Act and the antitiust birsham of the applicable wait; Division Pursuant to the HSR Act and the rules Promulgated periods under the HSR Act and the expiration of the applicable waiting make Consents approvals authorizations or failure to obtain purchaser from performing or notifications or actions of the waiting under this Agreement.

received, and has delivered to the Seller, a committen funds to Such Party to Provide the Purchaser has Agreement Consummate the transactions Contemplated by this

1'Expansion 1ndustrielle Brokers Except for Banque pour investment banker is entitled to any broker, finder or finder sor

other fee or commission in connection with the transactions contemplated by this Agreement based upon arrangements made by or on behalf of the Purchaser. The Purchaser is solely responsible for the fees and expenses of Banexi.

#### ARTICLE V

#### ADDITIONAL AGREEMENTS

SECTION 5.01. Conduct of Business Prior to the Closing. (a) The Seller covenants and agrees that, between the date hereof and the Closing Date, it shall conduct, and shall cause Burlington International to conduct, the Business only in the ordinary course of business and in a manner consistent with the current practice of the Business; and the Seller shall use, and shall cause Burlington International to use, all reasonable efforts to preserve substantially intact the business organization of the Business, to keep available the services of the current employees of the Seller and Burlington International with respect to the Business and to preserve the current relationships of the Seller and Burlington International with customers; suppliers and other persons with which the Seller and Burlington International has material business relations with respect to the Business.

- (b) Except as specifically provided for by this Agreement, between the date hereof and the Closing Date, the Seller will not, and will not permit Burlington International to, without the consent of the Purchaser:
  - (i) sell, pledge, dispose of or encumber any of the Assets or assets of Burlington International, except for any thereof in the ordinary course of business and in a manner consistent with current practice or as contemplated in the letter agreement dated the date hereof between the parties hereto relating to, among other things, certain surplus assets of Burlington International; or
  - (ii) increase the compensation payable or to become payable by the Seller or Builington International to their employees engaged in the Business except for increases in salary or wages of its employees in accordance with past practices, or grant any severance or termination pay to (except as may be required by existing arrangements), or enter into any employment or severance agreement with, any employee of the Seller or Burlington International engaged in the Business or establish,

adopt, enter into or amend any collective bargaining agreement, with respect to any employees of the Seller or Burlington International engaged in the Business, or amend any employee, retirement, profit sharing or other benefit plan of the Seller or Burlington International.

SECTION 5.02. Investigation. The Purchaser acknowledges and agrees that it (i) has made its own inquiry and investigation into, and based thereon has formed an independent judgment concerning, the Business, the Assets and the liabilities to be assumed pursuant to the Assumption Agreement, (ii) has been furnished with or given adequate access to such information about the Business, the Assets and the liabilities to be assumed pursuant to the Assumption Agreement, as it has requested, and (iii) will not assert any claim against the Seller or any of its officers, employees, agents, stockholders, affiliates, consultants, investment bankers or representatives, or hold the Seller or any such persons liable, for any inaccuracies, misstatements or omissions with respect to information (other than, with respect to the Seller, the representations and warranties contained in this Agreement) furnished by the Seller or such persons concerning the Business, the Assets or the liabilities to be assumed pursuant to the Assumption Agreement, unless such inaccuracies, misstatements or omissions shall constitute fraud on the part of the Seller.

SECTION 5.03. Access to Information. (a) From the date hereof to and including the Closing Date, upon reasonable notice, the Seller shall, and shall cause each of its officers, directors, employees, auditors and agents to (i) afford the officers, employees and authorized agents and representatives of the Purchaser reasonable access, during normal business hours, to the offices, properties, books and records of the Business and (ii) furnish to the officers, employees and authorized agents and representatives of the Purchaser such additional financial and operating data and other information regarding the assets; properties, goodwill and business of the Business as the Purchaser may from time to time reasonably request; provided, however, that such investigation shall not unreasonably interfere with the business or operations of the Seller.

(b) In order to facilitate the resolution of various claims, if any, made by or against the Seller prior to the Closing Date, after the Closing Date, upon reasonable notice, the Purchaser shall (i) afford the officers, employees and authorized agents and representatives of the Seller reasonable access, during normal business hours, to the offices, properties, books and records of the Purchaser

or the Business with respect to the Business, (ii) furnish to the officers, employees and authorized agents and other information regarding the Business as the Seller may from time to time reasonably request and (iii) make available to the Seller the employees of the Business whose assistance, testimony or presence is necessary to assist the Seller in evaluating any such claims and in defending such claims, including the presence of such persons as witnesses in hearings or trials for such purposes; provided, however, that such investigation shall not unreasonably interfere with the business or operations of the Purchaser.

(c) Notwithstanding the foregoing, the Seller shall not be required, prior to the Closing Date, to disclose or cause the disclosure to the officers, employees or authorized agents or representatives of the Purchaser (or provide access to any offices, properties, books or records of the Business that could result in the disclosure to such persons or others of) any confidential information relating to income or franchise taxes of the Seller, or other Taxes not relating exclusively to the Business, trade secrets, processes or patent or trademark applications or product development, nor shall the Seller be required to permit or cause others to permit the officers, employees or authorized agents or representatives of the Purchaser to copy or remove from the offices or properties of the Business any documents, drawings or other materials that might reveal any such confidential information or to photograph or sketch any part of the assets or properties of the Business.

Purchaser agrees that it shall preserve and keep all books and records of the Business for a period of at least eight years from the Closing Date. After such eight-year period, before the Purchaser shall dispose of any of such books and records, at least 90 days' prior written notice to such effect shall be given by the Purchaser to the Seller, and the Seller shall be given an opportunity, at its cost and expense, to remove and retain all or any part of such books or records as it may select. During such eight-year period, duly authorized representatives of the Seller shall, upon reasonable notice, have access thereto during normal business hours to examine, inspect and copy such books and records.

(b) The Seller and the Purchaser will provide each other with such cooperation and information as either of them reasonably may request of the other in filing any Tax return, amended return or claim for refund, determining a liability for Taxes or a right to a refund of Taxes, or in conducting

any audit or other proceeding in respect of Taxes. cooperation and information shall include providing copies of all relevant Tax returns, documents and records, or portions thereof, relating exclusively to the Business (but not including income or franchise tax returns of the Seller or portions thereof). Each party shall make its employees available on a mutually convenient basis to provide explanation of any documents or information provided hereunder. Notwithstanding Section 5.04(a), each party will retain all returns, schedules and work papers and all material records or other documents relating to Tax matters of the Business for the taxable year of the Seller ending after the Closing Date and for all previous years, until the expiration of the statute of limitations of the taxable years to which such returns and other documents relate (and, to the extent notified by the other party in writing, any extensions Any information obtained under this Section 5.04(b) shall be kept confidential, except as may be otherwise necessary in connection with the filing of returns or claims for refund or in conducting an audit or other proceeding.

(c) If in order properly to prepare documents required to be filed with governmental authorities or its financial statements, it is necessary that either party hereto be furnished with additional information relating to the Business and such information is in the possession of the other party hereto, such party agrees to use its best efforts to furnish such information to such other party, at the cost and expense of the party being furnished such information.

SECTION 5.05. Confidentiality. The terms of the letter agreement dated as of the date thereof (the "Confidentiality Agreement"), between Burlington Holdings Inc., a Delaware corporation, and the Purchaser are herewith incorporated by reference and shall continue in full force and effect until the Closing at which time such Confidentiality Agreement and the obligation of the Purchaser under this Section 5.05 shall terminate. If this Agreement is, for any reason, terminated prior to the Closing, the Confidentiality Agreement shall continue in full force and effect.

SECTION 5.06. Regulatory and Other Authorizations. Each party hereto will use its best efforts to obtain all authorizations, consents, orders and approvals of all rederal, state and foreign regulatory bodies and officials that may be or become necessary for its execution and delivery of, and the performance of its obligations pursuant to, this Agreement and will cooperate fully with the other

party in promptly seeking to obtain all such authorizations, consents, orders and approvals. Each party hereto agrees to make an appropriate filing of a Notification and Report Form pursuant to the HSR Act with respect to the transactions contemplated hereby within 10 days of the date hereof. The parties hereto will not take any action that will have the required approvals.

SECTION 5.07. Use of Name. (a) Anything herein to the contrary notwithstanding, no interest in or right to use the name "Burlington" or any derivation thereof or any logo, trademark or trade name, other than the trademark and trade names set forth in Section 3.10 of the Disclosure Schedule and in the Intellectual Property Agreement, in which the Seller has any interest (collectively, the "Retained Names and Marks") is being transferred to the Purchaser pursuant to the transactions contemplated hereby. The Purchaser will, as promptly as practicable following the Closing Date, remove or obliterate all the Retained Names and Marks from its signs, purchase orders, invoices, sales orders, labels, letterheads, shipping documents and other materials, and the Purchaser shall not put into use after the Closing Date any such materials not in existence on the Closing Date that bear any Retained Name or Mark or any name, mark or logo similar thereto. Notwithstanding the foregoing, the Purchaser shall be entitled for a period of 60 days following the Closing Date to use any signs, purchase orders, invoices, sales orders, labels, letterheads or shipping documents existing on the Closing Date that bear any Retained Name or Mark or any name, mark or logo similar thereto, in each case where the removal of any Retained Name or Mark or any such similar name, mark or logo would be impractical; provided, however, that the Purchaser shall place a stamp, mark or other notation on any such item that identifies the Business as a business of the Purchaser (and not the Seller). The Purchaser agrees that the Seller shall have no responsibility for claims by third parties arising out of, or relating to, the use by the Purchaser or any subsidiary thereof of any Retained Name or Mark after the Closing Date, and the Purchaser agrees to defend, indemnify and hold harmless the Seller from any and all claims that may arise out of the use thereof by the Purchaser or any business thereof whether or not in accordance with this Agreement

(b) Notwithstanding Section 5.07(a), the Seller will not object in any manner to the use by the Purchaser of the names "Glass Fabrics" or "BGF"; or any other name or trademark that is not a Retained Name or Retained Mark (each a "Purchaser's Name") in conjunction with the words "formerly

"Burlington Glass Fabrics", provided that the words
"Burlington Glass Fabrics" shall be shown less prominently
than the Purchaser's Name and shall at all times be used
(i) only in such manner as shall not cause confusion between
the business conducted by the Purchaser with the Assets and
any business of the Seller and (ii) in such manner as shall
not suggest that the Business or Purchaser or any affiliated
company or business of the Purchaser are in any way
affiliated with the Seller), and provided further that the
words "Burlington Glass Fabrics" may be used by the Purchaser
for a period of not more than two years from the Closing
Date; it being understood by the Purchaser that the Seller
makes no representation or warranty as to the right of the
Purchaser to use such names.

(c) Within five Business Days after the Closing, the Purchaser shall commence all necessary actions to change the name of Burlington International to remove therefrom any reference to the word "Burlington" or any part thereof and complete all such actions as promptly as practicable.

SECTION 5.06. Bulk Transfer Laws. The Purchaser hereby waives compliance by the Seller with the provisions of any so-called bulk transfer laws of any jurisdiction in connection with the sale of the Business to the Purchaser. The Seller shall, without gross-up for Taxes, indemnify and hold harmless the Purchaser against any and all liabilities which may be asserted by third parties against the Purchaser as a result of the Seller's noncompliance with any such bulk transfer law (except for those assumed by the Purchaser hereunder or in the Assumption Agreement).

SECTION 5.09. Sales and Transfer Taxes. The Purchaser agrees to assume liability for and to pay all sales taxes. The Seller agrees to assume liability for and to pay all other transfer and similar Taxes incurred as a result of the sale of the Business.

SECTION 5.10. Seller's Credit Union: Educational Loans. The Purchaser agrees to deduct from the paychecks of employees of the Business and remit (i) to the Burlington Industries, Inc. Federal Credit Union, all authorized loan payments (and related share account withholdings), and (ii) to the Seller, all authorized educational loan payments, of employees of the Business employed by the Purchaser after the Closing.

SECTION 5.11. Bill and Hold Inventories. The Purchaser agrees to be responsible, without charge to the Seller, for the storage, handling and administration of the

Bill and Hold Inventories. The Seller agrees to maintain necessary insurance on such Bill and Hold Inventories based on approximate values to be provided to the Seller by the Purchaser in a written notice to be delivered monthly.

SECTION 5.12. No Solicitation. For a period of one year following the Closing, (i) the Seller shall not, directly or indirectly, actively solicit or induce any employee of the Business to leave such employment and become an employee of the Seller or any of its affiliates, and (ii) the Purchaser shall not, directly or indirectly, actively solicit or induce any employee of the Seller, or any affiliate or subsidiary of the Seller to leave such employment and become an employee of the Purchaser or any of its affiliates.

SECTION 5.13. Release from Assumed Liabilities. Following the Closing, the Purchaser shall use its best efforts to obtain promptly the release of the Seller from all obligations and liabilities of the Seller assumed by the Purchaser pursuant to the Assumption Agreement.

SECTION 5.14. Office Space. The Seller agrees to provide to the Purchaser, to the extent permissible under the lease for such space and for a period not to exceed two years, the office space currently being occupied by Glass Fabrics in the 3330 West Friendly Avenue, Greensboro, North Carolina office of the Seller as of the date hereof: Rental for such space for the first two months following the Closing Date shall be the proportionate rental cost and allocated charges for utilities, taxes and other services currently incurred by the Seller in maintaining such space ("Cost"), and thereafter shall be at negotiated rates intended to approximate the then current arm's length rental rates for comparable space. The arrangements described in this Section 5.14 shall commence on the Closing Date and shall be terminable by either party to this Agreement three months after giving written notice of such termination to the other party.

SECTION 5.15. Confidentiality by the Purchaser.

(a) Except as permitted in Section 5.15(b), the Purchaser shall not disclose the terms of this Agreement after the date hereof to any person other than such officers, employees, independent contractors; agents, controlling persons, stockholders, or lenders to, the Purchaser, or such other persons acting on behalf of or in the interests of the Purchaser, to whom disclosure of the terms of this Agreement is, in the reasonable opinion of the Purchaser, necessary; provided, however, that the Purchaser shall under no

circumstances disclose the terms of this Agreement to any person who, following the Closing, shall be an employee of the Seller or to any other party, or any of its employees or representatives, known to the Purchaser to be interested in acquiring any other assets or business of the Seller.

may disclose the terms of this Agreement to any person:
(i) to the extent required by law; (ii) as may be required,
in the reasonable opinion of the Purchaser, in connection
with its performance of this Agreement or any of the
agreements contemplated hereby; (iii) as may be required, in
the reasonable opinion of the Purchaser, in the prosecution
or defense of the Seller or the Purchaser in any action at
law or in equity, arbitration, government investigation or
similar proceeding; or (iv) as may be required, in the
reasonable opinion of the Purchaser, in connection with its
performance of any agreement or other obligation of the
Purchaser relating to or arising from the Business.

SECTION 5.16. Further Action: Each of the parties hereto shall execute such documents and other papers and take such further actions as may be reasonably required or desirable to carry out the provisions hereof and the transactions contemplated hereby. Upon the terms and subject to the conditions hereof, each of the parties hereto shall use its best efforts to take, or cause to be taken, all actions and to do, or cause to be done, all other things necessary, proper or advisable to consummate and make effective as promptly as practicable the transactions contemplated by this Agreement and to obtain in a timely manner all necessary waivers, consents and approvals and to effect all necessary registrations and filings.

SECTION 5.17. Non-Competition. The Seller covenants that, without the prior written consent of the Purchaser, for a period of three years after the Closing Date, the Seller shall not directly or indirectly compete with the Purchaser in the manufacture or sale of glass, Kevlar(R) or carbon fabrics (or any combination thereof) or insulating felts made of glass fibers anywhere in the world. The parties agree that monetary damages alone are not an adequate remedy for a violation of this Section 5.17, and that an injunction, in addition to any monetary damages necessary to compensate the Purchaser for injuries suffered by reason of any breach of this Section 5.17, is the proper remedy.

SECTION 5.18. <u>Certain Tax Elections</u>. The Purchaser intends to make an express election under Internal Revenue Code Section 338 with respect to Burlington International.

Notwithstanding any provision contained in any deed delivered by the Seller to the Purchaser pursuant to Section 2.05(b), all the rights and obligations of the Seller and the Purchaser to each other and their respective successors and claims and encumbrances shall only be as set forth in, and of this Agreement and shall not be governed by or be subject to the provisions of such deeds in any respect.

#### ARTICLE VI

#### EMPLOYEE MATTERS

SECTION 6.01. Employees. Subject to the provisions of this Article VI, the Purchaser agrees to offer to employ following the Closing Date those persons (including those that are temporarily disabled) who are employed by the Seller in the Business on the Closing Date (the "Employees") on terms and conditions comparable to those in effect on the Closing Date, except where the Purchaser (or any of its affiliates or subsidiaries) has adjusted such terms and conditions in order to enable any plan covering employees thereof to meet the requirements of the Internal Revenue Code.

SECTION 6.02. Employee Plans. The Seller has provided the Purchaser with full and complete copies of, and all summary plan descriptions with respect to, the employee plans, programs and arrangements set forth in Section 6.02 of the Disclosure Schedule (the "Employee Plans").

of the Closing Date, the Employees shall no longer participate in the Retirement System of Burlington Industries, Inc. and Affiliated Companies (the "Burlington Retirement System"), and the Seller shall have taken all such action prior to the Closing Date as may be required to achieve this result. As soon as practicable following the Closing Date, the Purchaser shall (or shall cause an affiliate or subsidiary to) establish or provide the Employees who participated in the Burlington Retirement System with a defined benefit pension plan and related funding media qualified under the applicable provisions of the Internal Revenue Code (the "New Retirement Plan"), which, for a period of not less than two years following the Closing Date, shall provide the Employees who participated in the Burlington Retirement System with benefits that are

Burlington Retirement System; provided, however, that the Purchaser (or its affiliate or subsidiary) may adjust such the Purchaser (or its affiliate or subsidiary) may adjust such the Purchaser (or its affiliates or subsidiary) to meet the requirements of the Internal Revenue Code. The Purchaser to) grant past service an appropriate subsidiary or affiliate vesting under the New Retirement Plan to the Employees for under the Burlington Retirement System.

SECTION 6:04. Defined Contribution Plans. Effective as of the Closing Date, the Employees shall no longer participate in the Profit Sharing Retirement Plan of Burlington Industries, Inc. and Affiliated Companies (the "Hourly Plan") and the Profit Sharing Plan of Burlington Industries, Inc. and Affiliated Companies (the "Salaried Plan") and the Seller shall have taken all such action as may be necessary to achieve this result. As soon as practicable following the Closing Date, the Purchaser shall (or shall cause an appropriate subsidiary or affiliate to) establish or provide the Employees who participated in either the Hourly Plan or the Salaried Plan with one or more defined contribution plans and related funding media qualified under the applicable provisions of the Internal Revenue Code (the "New Defined Contribution Plans") which, for a period of not less than two years following the Closing Date, shall provide the Employees who participated in the Hourly Plan or the Salaried Plan with benefits that are substantially comparable to those provided under such plans; provided, however, that the Purchaser (or its affiliate or subsidiary) may adjust such benefits in order to enable any plan covering employees of the Purchaser (or its affiliates or subsidiary) to meet the requirements of the Internal Revenue Code. The Purchaser shall (or shall cause an appropriate subsidiary or affiliate to) grant past service credit for purposes of eligibility and vesting to the Employees under the New Defined Contribution Plans for all service credited to the Employees as of the Closing Date under the Hourly Plan or the Salaried Plan.

of the Closing Date, the Purchaser shall establish severance plans and programs that are substantially comparable to the Seller's severance policies in effect on the Closing Date with respect to the Employees, in accordance with their terms as of such date, giving effect to years of service with the Seller for purposes of determining any benefits thereunder, and shall maintain such severance policies, without any amendments thereto, for a period of not less than two years following the Closing Date.

SECTION 6.06. Other Employee Benefits. period of not less than two years following the Closing Date, the Purchaser shall (or shall cause any other appropriate subsidiary or shall cause any other appropriate subsidiary or affiliate to) provide the Employees with benefits (including, without limitation, welfare benefits) that are substantially comparable, taken as a whole, to the benefits provided under the Employee Plans (other than the Employee Plans described in Sections 6.03, 6.04 and 6.05), as in effect on the Closing Date; provided, however, that the Purchaser (or its affiliate or subsidiary) may adjust such benefits in order to enable any plan covering employees of the Purchaser (or its affiliates or subsidiary) to meet the requirements of the Internal Revenue Code. To the extent that service is relevant for vesting or benefit calculations or allowances (including, without limitation, entitlements to vacation and sick days) under any plan or arrangement maintained in order to provide the benefits described in the previous sentence, such plan or arrangement shall credit the Employees for service on or prior to the Closing Date with the Seller or any affiliate of the Seller. Nothing herein shall be deemed to require the Purchaser to establish or provide Employees with executive incentive, equity or phantom equity plans, programs or arrangements.

SECTION 6.07 Employee Communications. The Seller agrees that following the execution of this Agreement any communication or notice that the Seller intends to distribute of cause to be distributed to any Employee (other than any thereof required to be distributed by law) shall first be submitted to the Purchaser for its approval, which shall not be unreasonably withheld. In the event that any such communication or notice is so required to be distributed by law, the Seller shall furnish a copy thereof to the Purchaser promptly after the distribution thereof:

#### ARTICLE VII

#### TAX MATTERS

SECTION 7.01. Seller's Tax Indemnity. (a) The Seller agrees to indemnify the Purchaser, without gross-up for Taxes (other than Taxes of the United States and its political subdivisions, if any), against (i) all Taxes based upon or related to income of Burlington International, with respect to any period or portion thereof that ends on or before the Closing Date and (ii) all other Taxes of the Business with respect to any period or portion thereof that ends on or before the Effective Date.

- this Section 7.01 shall be made within five days following written notice by the Purchaser that payment of such amounts to the appropriate tax authority is due, except that such payment is not required to be made by the Seller earlier than two days before it is due. In the case of a Tax that is contested in accordance with the provisions of Section 7.03, payment of the Tax to the appropriate taxing authority will not be considered to be due earlier than when a final determination to such effect is made by the appropriate taxing authority or a court.
- 7.01 or Section 9.03, any amount paid by the Purchaser under Section 9.02, and any other amount in the nature of an indemnity payment pursuant to this Agreement shall be treated as an adjustment to the Purchase Price unless the indemnified party provides the indemnifying party with an opinion of nationally recognized independent counsel, in form and substance reasonably acceptable to the indemnifying party, that there is not substantial authority (within the meaning of Section 6661 of the Internal Revenue Code and the regulations thereunder) for such treatment. This paragraph shall also apply with respect to any payments in the nature of an indemnity pursuant to the provisions of the Assumption Agreement, the Intellectual Property Agreements and the Service Agreement.
- SECTION 7.02. Allocation of Taxes. For purposes of this Agreement, (i) in the case of any Taxes other than those based upon or related to income that are payable on a periodic basis for a period that begins before and ends after the Effective Date, the portion of such Taxes that are payable for the period ending on the Effective Date shall be deemed to be the amount of such Taxes for the entire period multiplied by a fraction the numerator of which is the number of days in the period ending on the Effective Date and the denominator of which is the number of days in the entire period, and (ii) in the case of any Taxes based upon or related to income that are payable on a periodic basis for a period that begins before and ends after the Closing Date, the portion of such Taxes that is payable for the period ending on the Closing Date shall be deemed to be those that would be payable if the taxable year ended on the Closing Date. Any credits shall be provated based upon the fraction employed in clause (i) of the next preceding sentence Clause (i) shall be applied with respect to Taxes relating capital (including net worth or long-term debt) or intangibles by reference to the level of such items on the Effective Date.

after SECTION 7.03. Certain Contest Rights. (a) Profidence of the purchaser of a written notice of any time, would or might give rise to a claim or the commencent time, claim or circumstances which, after the lapse or (or threatened commencement) of any action, proceeding or (or threatened might give rise to a claim or the commenced investigation with respect to which indemnity may be sough investigation with respect to which indemnity may be sought of the control of the under Section with respect to which indemnity may be a purchaser shall give notice thereof to the Seller (the Purchaser shall (an "Asserted Tax Liability"), the Claim Notice thereof to the Seller (the "Tax Claim Notice shall contain factual Promptly Claim Notice"). give notice thereof to the Seller (the "lax information (to the Tax Claim Notice shall contain factual the Asserted Tax Liability in reasonable detail and shall the Asserted Tax Liability in reasonable detail and shall or other document received fi include copies of any notice or other document received from Liability. If the purchaser fails to give the Seller prompt Liability authority in respect of any such Asserted lax notice of an Asserted Tax Liability as required by this Liability. If the Purchaser fails to give the Seller promp Section 7.03. Asserted Tax Liability as required by this the Seller in a detriment to the Seller of Seller promp our suant to Section 7.03. Old with respect to the Asserted Tax Pursuant to Section 7:01 with respect to the Asserted Tax to Shall be reduced by the amount of such detriment Pursuant to Section 7.01 with respect to the Asserted Tax Notwithstanding be reduced by the amount of such detriment. Asserted Tax Liability in both the Seller is precluded by the administrative and Asserted Tax Liability in both the administrative and indemnify for any loss and sing one of such Asserted Tax indemnity for any loss amising out of such Asserted Lax Liability

either (b) The Seller may elect to compromise or contest and by its own counsel any Asserted Tax Liability. It the Compromise of Contest Liability is compromise of Contest any Asserted Tax Liability. If the Asserted Tax Liability is compromise of Contest such Asserted Tax Durchaser of its intent to do so requires) notify the nature contest of such Asserted Tax Liability is contest of such Asserted Tax contest of such Asserted Tax Liability. In the Compromise of Liability of Such Asserted Tax Liability in the Compromise of Liability in the Compromise of Contest of Such Asserted Tax Liability. If the Seller elects is contest of Such Asserted Tax Liability. Contest of Such Asserted Tax Liability. If the Seller e not to Compromise or contest the Asserted Tax Liability provided notify the Purchaser of its election as herein such Asserted Tax Liability.

Section 7.03 the Purchaser may pay compromise or contest such Asserted Tax Liability hotels.

Burchaser may not settle or compromise or contest this such asserted Tax Liability over the objection of the Seller, provided that the Seller may not settle or compromise any Asserted Tax Liability over the objection of the Seller, provided the Seller may each participate at its own expense than contest of such Asserted Tax Liability over the Seller may each participate at its own expense rand chooses to such Asserted Tax Liability. If the Seller may each participate at its own expense rand shall promptly empower (by power of attorney and such other appropriate) the Seller may be appropriate) the Seller and Such countered that the Seller and Such others.

representatives as it may designate to represent the Purchaser in any audit, claim for refund or administrative or judicial proceeding insofar as such audit, claim for refund or proceeding involves an Asserted Tax Liability for which the Seller would be liable under Section 7.01. In the event that any compromise or contest at the Seller's election requires payment of an alleged deficiency or posting of any bond, such payment or bond shall be advanced or posted by the Seller at its expense.

Tax refunds that are received by Burlington International and any credits against Tax to which Burlington International becomes entitled (including the benefit of a net operating loss carryover to a subsequent period), that relate to tax periods or portions thereof ending on or before the Closing Date, shall be for the account of the Seller, and the Purchaser shall promptly pay over to the Seller any such refund or the amount of any such credit upon receipt or entitlement thereto. In addition, to the extent that a claim for refund or a proceeding results in a payment or a credit against Tax by a taxing authority to the Purchaser or Burlington International of an amount attributable to an amount paid by the Seller under Section 7.01 of this Agreement, the Purchaser shall promptly pay such amount to the Seller.

(b) Any amount otherwise payable by the Seller under Section 7.01 shall be reduced by any Tax benefit to the Purchaser or any affiliate or Burlington International for a period or portion thereof beginning after the Closing Date in connection with the payment of any Taxes for which the Seller is responsible under Section 7.01 or in connection with any underlying adjustments resulting in the obligation of the Purchaser or Burlington International to pay Taxes with respect to a period or portion thereof ending on or before the Closing Date (such as a timing adjustment resulting in a Tax deduction for a period after the Closing Date). A Tax Tax deduction for a period after the Closing Date). A Tax benefit will be considered to be realized by the Purchaser or Burlington International for purposes of this Section 7.04 at the time that it files its tax return on which it claims any deduction reportable with respect to a payment hereunder deduction reportable with respect to a payment hereunder to use reasonable best efforts to take such action as is necessary (including, without limitation, the filling of an amended Federal income tax return or claim for a refund) in order to obtain any Tax benefit that would reduce the amount otherwise payable by the Seller under Section 7.01.

SECTION 7.05. <u>Purchaser Tax Indemnity</u>. (a) The Purchaser agrees to indemnify the Seller for Taxes

attributable to any amount included in gross income by the Seller pursuant to Subtitle A, Chapter IN, Part IIIF of the Internal Revenue Code ("Subpart F") or Taxes attributable to amounts included in income as a dividend under Section 1248 of the Internal Revenue Code, to the extent that such Taxes exceed the Taxes that would otherwise have been payable by the Seller as a result of the application of Subpart F or Section 1248 of the Internal Revenue Code had the taxable year of Burlington International ended on the Closing Date (the "Additional Taxes") and only if the Additional Taxes exceed \$100,000. The Seller represents that the current fiscal year of Burlington International will end on or about June 30, 1988, unless it is changed by the Purchaser or an affiliate of the Purchaser or, after the Closing, by Burlington International.

- Burlington International immediately following the Closing Date, Seller's Accountants shall determine the amount of the Additional Taxes payable by the Purchaser under this Section 7.05 by reference to the books and records of Burlington International for such taxable year. Seller's Accountants shall notify the Purchaser in writing of the amount of Additional Taxes so determined along with appropriate work papers; and after verification by reference to the books and records of Burlington International, the Purchaser shall pay such amount to the Seller within 30 days of such written notice. The Purchaser shall cooperate with Seller's Accountants in the determination of Additional Taxes in the same manner as provided in Section 2.03(b)(ii).
- appropriate tax authority or a court, the amount of Additional Taxes is adjusted, then the Seller shall repay to the Purchaser within 30 days of the final determination any reduction in Additional Taxes, and the Purchaser shall pay to the Seller within 30 days of written notice by the Seller of such final determination the amount of any increase in Additional Taxes, as the case may be. Notice shall be given of any proposed adjustment by a taxing authority of the amount reported as Additional Taxes and such adjustment shall be contested or compromised in accordance with principles similar to those set forth in Section 7.03.

SECTION 7.06. <u>Preparation of Tax Returns</u>: The Purchaser shall prepare or cause Burlington International to prepare any tax returns for periods beginning before and ending after the Closing Date. Such returns and schedules shall be prepared on a basis consistent with those prepared for prior tax years and shall be submitted to the Seller for

agrees to consider all comments made by the Seller in good faith. In the case of a period that begins before and ends after the Closing Date (or the Effective Date, in the case of to which the Purchaser prepares (or causes the preparation to any portion of such period ending on the Closing Date (or the Effective Date, in the case of the tax return, the treatment of any items with respect to any portion of such period ending on the Closing Date (or by mutual agreement of the Seller and the Purchaser.

SECTION 7.07. Article VII Exclusivity. Except as expressly provided otherwise in this Article VII and except for the provisions of Sections 1.01(cc), 2.01(c)(iv), 3.16, 5.03(c), 5.04, 5.09 and 5.18 of this Agreement, this Article VII shall be the sole provision governing Tax matters and indemnities therefor under this Agreement.

### ARTICLE VIII

### CONDITIONS TO CLOSING

SECTION 8.01. Conditions to Obligations of the Seller. The obligations of the Seller to consummate the transactions contemplated by this Agreement shall be subject to the fulfillment, at or prior to the Closing, of each of the following conditions:

- (a) Representations and Warranties: Covenants. The representations and warranties of the Purchaser contained in this Agreement shall be true and correct in all material respects as of the Closing, with the same force and effect as if made as of the Closing, other than such representations and warranties as are specifically made as of another date, and all the covenants contained in this Agreement to be complied with by the Purchaser on or before the Closing Date shall have been complied with in all material respects, and the Seller shall have received a certificate of the Purchaser to such effect signed by a duly authorized officer thereof;
- (b) HSR Act. Any waiting period (and any extension thereof) under the HSR Act applicable to the purchase of the Business contemplated hereby shall have expired or been terminated;
- (c) <u>Litigation</u>. No order, stay, judgment or decree shall have been issued by any court restraining or

prohibiting the consummation of the transactions contemplated by this Agreement;

- (d) Agreements. The Purchaser shall have executed and delivered to the Seller: (i) the Assumption Agreement, (ii) the Facilities Lease, (iii) the Intellectual Property Agreements and (iv) the Service Agreement;
  - (e) [Intentionally Omitted.]; and
- (f) Legal Opinion. The Seller shall have received from the Purchaser's counsel a legal opinion addressed to the Seller, dated the Closing Date, in substantially the form of Exhibit 8.01(f).

SECTION 8.02. Conditions to Obligations of the Purchaser. The obligations of the Purchaser to consummate the transactions contemplated by this Agreement shall be subject to the fulfillment, at or prior to the Closing, of each of the following conditions:

- (a) Representations and Warranties: Covenants. The representations and warranties of the Seller contained in this Agreement shall be true and correct as of the Closing (except where the failure to be so true and correct would not have a Material Adverse Effect), with the same force and effect as if made as of the Closing, other than such representations and warranties as are specifically made as of another date, and all the covenants contained in this Agreement to be complied with by the Seller on or before the Closing Date shall have been complied with (except where the failure to so comply would not have a Material Adverse Effect), and the Purchaser shall have received a certificate of the Seller to such effect signed by a duly authorized officer thereof;
- (b) HSR Act. Any waiting period (and any extension thereof) under the HSR Act applicable to the purchase of the Business contemplated hereby shall have expired or been terminated;
- (c) <u>Litigation</u>. No order, stay, judgment or decree shall have been issued by any court restraining or prohibiting the consummation of the transactions contemplated by this Agreement;
- (d) Agreements. The Seller shall have executed and delivered to the Purchaser: (i) the Assumption

Agreement, (ii) the Facilities Lease, (iii) the Intellectual Property Agreements and (iv) the Service Agreement;

- (e) Release of Liens. All liens and other encumbrances on or against the Assets created in favor of the Lenders under the Bank Credit Agreement dated as of June 23, 1987, as amended, entered into among Burlington Holdings Inc., a Delaware corporation, and the Lenders set forth therein, shall have been released by Bankers Trust Company, as Collateral Agent for and representative of the Lenders;
- (f) Legal Opinion: The Purchaser shall have received from the Seller's general counsel a legal opinion addressed to the Purchaser, dated the Closing Date and in substantially the form of Exhibit 8.02(f); and
- (g) Plant Damage. None of the three principal plants of the Business shall have been damaged to such an extent that it is not usable on the Closing Date for the purposes of the Business.

## ARTICLE IX

### INDEMNIFICATION

SECTION 9.01. Survival of Representations and Warranties. Subject to the limitations and other provisions of this Agreement, the representations, warranties, covenants and agreements of the parties hereto contained herein shall survive the Closing and shall remain in full force and effect, regardless of any investigation made by or on behalf of the Seller or the Purchaser, for a period of 15 months after the Closing Date; provided, however, that the agreements set forth in Sections 5.04, 5.07, 5.08, 5.09, 5.10, 5.11, 5.12, 5.13, 5.14, 5.15, 5.16, 5.17, 5.18 and 5.19, Article VI, Article VII and Sections 9:02, 9.03, 11.01 and 11.03 shall remain in full force and effect until the applicable period under the statute of limitations therefor has expired; provided further, however, that, with respect to any real property, the representations and warranties set forth in Section 3.07(b) shall terminate upon the receipt by the Purchaser of a title insurance policy with respect to such real property except to the extent such policy contains exceptions other than Permitted Exceptions.

SECTION 9:02. Indemnification by the Purchaser.

(a) The Purchaser agrees, subject to the other terms and

Conditions of this Agreement and without gross-up for Taxes (other than Taxes of the United States and its political subdivisions, if any), to indemnify the Seller against and hold it harmless from all liabilities of and damages to the Seller arising out of the material breach of any material representation, warranty, covenant or agreement of the Purchaser herein (other than Article VII, it being understood that the sole remedy for breach thereof shall be pursuant to Article VII). Anything in Section 9.01 of this Agreement to the contrary notwithstanding, no claim may be asserted nor may any action be commenced against the Purchaser for breach of any representation, warranty, covenant or agreement contained herein, unless written notice of such claim or action is received by the Purchaser describing in detail the facts and circumstances with respect to the subject matter of such claim or action on or prior to the date on which the representation, warranty, covenant or agreement on which such claim or action is based ceases to survive as set forth in such Section 9.01, irrespective of whether the subject matter of such claim or action shall have occurred before or after such date; provided, bowever, that a claim may be asserted and an action may be commenced against the Purchaser for breach of the agreements set forth in Sections 5.04, 5.07, 5.09, 5.10, 5.11, 5.12, 5.13, 5.14, 5.15, 5.16, 5.17, 5.18 and 5.19, Article VI, Article VII and Sections 9.02 and 11.01 of this Agreement, until the applicable period under the statute of limitations therefor has expired

- (b) Payments by the Purchaser pursuant to subsection (a) of this Section 9.02 shall be limited to the amount of any liability or damage that remains after deducting therefrom any Tax benefit to the Seller or any affiliate thereof and any insurance proceeds and any indemnity, contribution or other similar payment payable to the Seller from any third party with respect thereto. Tax benefits will be considered to be realized by the Seller for purposes of this Section 9.02 at the time that it files its tax return on which it claims any deduction reportable with respect to a payment hereunder. The Seller shall use reasonable best efforts to take any such action as is necessary (including, without limitation, the filing of an amended Federal income tax return or claim for a refund) in order to obtain any such Tax benefit.
- (c) The Seller agrees to give the Purchaser prompt written notice of any claim, assertion, event or proceeding by or in respect of a third party of which it has knowledge concerning any liability or damage as to which it may request indemnification hereunder. The Purchaser shall have the right to direct, through counsel of its own choosing, the

defense or settlement of any such claim or proceeding at its own expense. If the Purchaser elects to assume the defense of any such claim or proceeding, the Seller may participate in such defense, but in such case the expenses of the Seller shall be stated by the shall be paid by the Seller. The Seller shall provide the Purchaser with access to its records and personnel relating to any such claim, assertion, event or proceeding during normal business hours and shall otherwise cooperate with the Purchaser in the defense or settlement thereof, and the Purchaser shall reimburse the Seller for all its reasonable out-of-pocket expenses in connection therewith. If the Purchaser elects to direct the defense of any such claim or proceeding, the Seller shall not pay, or permit to be paid, any part of any claim or demand arising from such asserted liability, unless the Purchaser consents in writing to such payment or unless the Purchaser, subject to the last sentence of this subsection (c), withdraws from the defense of such asserted liability, or unless a final judgment from which no appeal may be taken by or on behalf of the Purchaser is entered against the Seller for such liability. If the Purchaser shall fail to defend, or if, after commencing or undertaking any such defense, fails to prosecute or withdraws from such defense, the Seller shall have the right to undertake the defense or settlement thereof, at the Purchaser's expense. If the Seller assumes the defense of any such claim or proceeding pursuant to this subsection and proposes to settle such claim or proceeding prior to a final judgment thereon or to forego appeal with respect thereto. then the Seller shall give the Purchaser prompt written notice thereof and the Purchaser shall have the right to participate in the settlement or assume or reassume the defense of such claim or proceeding.

(d) Except as set forth in this Agreement, the Purchaser is not making any representation, warranty, covenant or agreement with respect to the matters contained herein. Anything herein to the contrary notwithstanding, no breach of any representation, warranty, covenant or agreement contained herein shall give rise to any right on the part of the Seller, after the consummation of the purchase and sale of the Business contemplated hereby, to rescind this Agreement or any of the transactions contemplated hereby.

SECTION 9.03. Indemnification by the Seller.

(a) The Seller agrees, subject to the other terms and conditions of this Agreement and without gross-up for Taxes conditions of the United States and its political (other than Taxes of the United States and its political subdivisions, if any), to indemnify the Purchaser against and subdivisions, if any), to indemnify the Purchaser against and hold it harmless from all liabilities of and damages to the hold it harmless from all liabilities of any material purchaser, arising out of the material breach of any material

representation, warranty, covenant or agreement of the Seller herein (other than Article VII, it being understood that the sole remedy for breach thereof shall be pursuant to Article VII). Anything in Section 9.01 to the contrary notwithstanding, no claim may be asserted nor may any action be commenced against the Seller for breach of any representation, warranty, covenant or agreement contained herein, unless written notice of such claim or action is received by the Seller describing in detail the facts and circumstances with respect to the subject matter of such claim or action on or prior to the date on which the representation, warranty, covenant or agreement on which such claim or action is based ceases to survive as set forth in such Section 9.01, irrespective of whether the subject matter of such claim or action shall have occurred before or after such date; provided, however, that a claim may be asserted and an action may be commenced against the Seller for breach of the agreements in Sections 5.04, 5.08, 5.11, 5.13, 5.14, 5.16, 5.17 and 5.18, Article VI, Article VII and Sections 9.03, 11.01 and 11.03 of this Agreement, until the applicable period under the statute of limitations therefor has expired; provided further, however, that, with respect to any real the representations and warranties set forth in Section 3.07(b) shall terminate upon the receipt by the Purchaser of a title insurance policy with respect to such real property except to the extent such policy contains exceptions other than Permitted Exceptions.

No claim may be made against the Seller for indemnification pursuant to this Section 9.03 with respect to any individual item of liability or damage, unless such item exceeds \$300,000 and unless the aggregate of all liabilities and damages of the Purchaser with respect to this Section 9.03 shall exceed \$3,000,000, and the Seller shall not be required to pay or be liable for the first \$3,000,000 in aggregate amount of any such liabilities and damages. The Purchaser shall not be indemnified pursuant to this Section 9.03 with respect to any individual item of liability or damage if the aggregate of all liabilities and damages of the Purchaser for which the Purchaser has received indemnification pursuant to this Section 9.03 shall have exceeded 100% of the Purchase Price. For the purposes of this subsection (b), in computing such individual or aggregate amounts of claims, the amount of each claim shall be deemed to be an amount (i) net of any Tax benefit to the Purchaser, (ii) net of any insurance proceeds and any indemnity, contribution or other similar payment payable by any third party with respect thereto, (iii) het of any reserves provided for the situation in question in the Audited Statement of Net Assets and (iv) net of any

adjustments to the Purchase Price paid pursuant to Sections 2.03 or 2.04 with respect to the subject matter in dispute.

- (c) Payments by the Seller pursuant to subsection (a) of this Section 9.03 shall be limited to the amount of any liability or damage that remains after deducting therefrom (i) any Tax benefit to the Purchaser or any affiliate thereof (ii) any insurance proceeds and any indemnity, contribution or other similar payment payable to the Purchaser or any affiliate from any third party with respect thereto, (iii) any reserves provided for the situation in question in the Audited Statement of Net Assets, and (iv) any adjustments to the Purchase Price paid pursuant to Sections 2.03 or 2.04 with respect to the subject matter in dispute. Tax benefits will be considered to be realized by the Purchaser or any affiliate for purposes of this Section 9.03 at the time that it or any affiliate files its tax return on which it or the affiliate claims any deduction with respect to a payment hereunder. The Purchaser shall, and shall cause its affiliates to, use reasonable best efforts to take any such action as is necessary (including, without limitation, the filing of an amended Federal income tax return or claim for a refund) in order to obtain any such Tax benefit.
- (d) The Purchaser agrees to give the Seller prompt written notice of any claim, assertion, event or proceeding by or in respect of a third party of which it has knowledge concerning any liability or damage as to which it may request indemnification hereunder or any liability or damage as to which the \$3,000,000 amount referred to in subsection (b) of this Section 9.03 may be applied. The Seller shall have the right to direct, through counsel of its own choosing, the defense or settlement of any such claim or proceeding at its own expense. If the Seller elects to assume the defense of any such claim or proceeding, the Purchaser may participate in such defense, but in such case the expenses of the Purchaser shall be paid by the Purchaser. The Purchaser shall provide the Seller with access to its records and personnel relating to any such claim, assertion, event or proceeding during normal business hours and shall otherwise cooperate with the Seller in the defense or settlement thereof, and the Seller shall reimburse the Purchaser for all its reasonable out-of-pocket expenses in connection therewith. If the Seller elects to direct the defense of any such claim or proceeding, the Purchaser shall not pay, or permit to be paid, any part of any claim or demand arising permit to be pare, and in the seller consents in from such asserted liability unless the Seller consents in writing to such payment or unless the Seller, subject to the last sentence of this subsection (d), withdraws from the

defense of such asserted liability or unless a final judgment from which no appeal may be taken by or on behalf of the Seller is entered against the Purchaser for such liability. If the Seller shall fail to defend, or if after commencing or undertaking any such defense fails to prosecute or withdraws from such defense, the Purchaser shall have the right to undertake the defense or settlement thereof, at the Seller's expense. If the Purchaser assumes the defense of any such claim or proceeding pursuant to this subsection (d) and proposes to settle such claim or proceeding prior to a final judgment thereon or to forego appeal with respect thereto, then the Purchaser shall give the Seller prompt written notice thereof and the Seller shall have the right to participate in the settlement or assume or reassume the defense of such claim or proceeding.

- (e) Anything in this Article IX to the contrary notwithstanding, the Seller shall have no obligation under this Article IX to indemnify the Purchaser with respect to any matter (i) that was the subject of a dispute with respect to the Audited Statement of Net Assets pursuant to the terms of Section 2.03(b) but did not result in an adjustment to the Purchase Price pursuant to such Section 2.03(b), (ii) that was the subject of a dispute with respect to the Audited Statement of Net Earnings or the Cash Settlement Amount Statement pursuant to the terms of Section 2.04(e) but did not result in an adjustment to the Cash Settlement Amount or the Purchase Price pursuant to such Section 2.04(e) or (iii) that pertains to the Audited Statement of Net Assets, the Audited Statement of Net Earnings or the Cash Settlement Amount Statement or the items dealt with thereon but was not the subject of any dispute by the Purchaser pursuant to such Sections 2.03(b) or 2.04(e). Any such matter shall be disregarded for all purposes of this Section 9.03.
- (f) Except as set forth in this Agreement, the Seller is not making any representation, warranty, covenant or agreement with respect to the matters contained herein. Anything herein to the contrary notwithstanding, no breach of any representation, warranty, covenant or agreement contained herein shall give rise to any right on the part of the Purchaser, after the consummation of the purchase and sale of the Business contemplated hereby, to rescand this Agreement or any of the transactions contemplated hereby.

### ARTICLE X

## TERMINATION, AMENDMENT AND WAIVER

SECTION 10:01. Termination. This Agreement may be terminated at any time prior to the Closing:

- (a) By the mutual written consent of the Seller and
- (b) By the Seller, if the Closing shall not have occurred by the later of the sixtieth day after the date hereof and 10 days after the condition set forth in Section 8.02(b) shall have been satisfied; or
- (c) By either the Seller or the Purchaser, if the Closing shall not have occurred prior to September 30, 1988; provided, however, that the right to terminate this Agreement under this Section 10.01(c) shall not be available to any party whose failure to fulfill any obligation under this Agreement shall have been the cause of, or resulted in, the failure of the Closing to occur prior to such date. Time shall be of the essence in this Agreement.

SECTION 10.02: Effect of Termination. In the event of termination of this Agreement as provided in Section 10.01, this Agreement shall forthwith become void and there shall be no liability on the part of any party hereto except (a) as set forth in Section 5.05 and Section 11.01 and (b) nothing herein shall relieve either party from liability for any wilful breach hereof:

SECTION 10.03. Amendment: This Agreement may not be amended or modified except by an instrument in writing signed by the Seller and the Purchaser.

SECTION 10.04. Waiver. At any time prior to the Closing, either party hereto may (a) extend the time for the performance of any of the obligations or other acts of the other party hereto, (b) waive any inaccuracies in the other party hereto, (b) waive any inaccuracies in the representations and warranties contained herein or in any representations and warranties contained herein or in any document delivered pursuant hereto and (c) waive compliance with any of the agreements or conditions contained herein. Any such extension or waiver shall be valid if set forth in an instrument in writing signed by the party to be bound thereby.

#### ARTICLE XI

### GENERAL PROVISIONS

SECTION 11.01. Expenses. All costs and expenses, including, without limitation, fees and disbursements of counsel, financial advisors and accountants, incurred in connection with this Agreement and the transactions contemplated hereby shall be paid by the party incurring such costs and expenses, whether or not the Closing shall have occurred.

SECTION 11.02. Notices. All notices and other communications given or made pursuant hereto shall be in writing and shall be deemed to have been duly given or made as of the date delivered or mailed if delivered personally or mailed by registered or certified mail (postage prepaid, return receipt requested) to the parties at the following addresses (or at such other address for a party as shall be specified by like notice, except that notices of changes of address shall be effective upon receipt):

(a) if to the Seller

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Burlington Industries, Inc. 3330 West Friendly Avenue Greensboro, North Carolina 27410 Attention: General Counsel

(b) if to the Purchaser:

Porcher Textile
Badinieres
38400 Bourgoin-Jallien
FRANCE
Attention: Director General

with a copy to:

Milgrim Thomajan & Lee, P.C.

405 Lexington Avenue

New York, New York, 10174

Attention: Roger M. Milgrim; Esq.

and

Raymond F. Steckel; Esq.

SECTION 11.03: Public Announcements. The parties to this Agreement shall not make any public announcements in respect of this Agreement or the transactions contemplated herein without prior notification to each other and shall cooperate as to the timing and contents of any such announcement.

SECTION 11.04. Consent to Jurisdiction. The Purchaser hereby irrevocably submits to the jurisdiction of New York State or Federal court sitting in the City of New York in any action or proceeding brought by the Seller arising out of or relating to this Agreement or any other agreement or transaction contemplated hereby, and the Purchaser hereby irrevocably agrees that all claims in respect of such action or proceeding may be heard and determined in such New York State or Federal court. Purchaser hereby irrevocably waives, to the fullest extent it may effectively do so, the defense of an inconvenient forum to the maintenance of such action or proceeding. Purchaser hereby irrevocably appoints Milgrim Thomajen & Lee, P.C. (the "Processing Agent"), with an office on the date hereof at 405 Lexington Avenue, New York, New York 10174, United States, as its agent to receive on behalf of the Purchaser and its property service of copies of the summons and complaint and any other process which may be served in any such action or proceeding. Such service may be made by mailing, by certified mail (return receipt requested) or delivering a copy of such process to the Purchaser in care of the Process Agent at the Process Agent's above address, and the Purchaser hereby irrevocably authorizes and directs the Process Agent to accept such service on its behalf. As an alternative method of service, the Purchaser also irrevocably consents to the service of any and all process in any such action or proceeding by the mailing of copies of such process to the Purchaser at its address specified in Section 11.04. The Purchaser agrees that a final judgment in any such action or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law. Nothing in this Section 11.04 shall affect the right of Seller to serve legal process in any other manner permitted by law or affect the right of Seller to bring any action or proceeding against the Purchaser or its property in the courts of any other jurisdictions

SECTION 11.05. Headings. The headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement.

SECTION 11.06. Severability If any term or other provision of this Agreement is invalid; illegal or incapable of being enforced by any rule of law or public policy, all other conditions and provisions of this Agreement shall other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner adverse to any party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement

so as to effect the original intent of the parties as closely as possible in an acceptable manner to the end that possible.

SECTION 11.07. Entire Agreement. This Agreement agreements the entire agreement and supersedes all prior Agreement, both written and oral, between the Seller and the Purchaser with respect to the subject matter hereof and, intended to confer upon any other person any rights or remedies hereunder.

SECTION 11:08. Assignment. This Agreement shall not be assigned by operation of law or otherwise, except that the Purchaser may assign this Agreement or rights hereunder to any affiliate or affiliates of the Purchaser, provided that such assignee assumes all the same liabilities of the Purchaser hereunder or contemplated hereby to be assumed by the Purchaser and the Purchaser remains fully liable for all such liabilities.

SECTION 11 09. Governing Low. This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York.

SECTION 11.10. Counterparts. This Agreement may be executed in one or more counterparts, and by the different parties hereto in separate counterparts, each of which when executed shall be deemed to be an original but all of which taken together shall constitute one and the same agreement.

IN WITNESS WHEREOF; the Seller and the Purchaser have caused this Agreement to be executed as of the date first written above by their respective officers thereunto duly authorized.

BURLINGTON INDUSTRIES, INC.

By Title:

PORCHER TEXTILE

Title

# ATTACHMENT B

ASSUMPTION AGREEMENT dated as of March 21, 1988, between BURLINGTON INDUSTRIES, INC., a Delaware corporation ("Burlington"), and BGF INDUSTRIES, INC., a Delaware corporation (the "Purchaser").

WHEREAS, Burlington and the Purchaser have concurrently herewith consummated the purchase by the Purchaser of substantially all of the business and assets of Burlington's "Burlington Glass Fabrics Company" division, such purchase being pursuant to the terms and conditions of the Purchase Agreement dated as of February 12, 1988 (the "Purchase Agreement"; terms defined in the Purchase Agreement and not otherwise defined herein are used herein as therein defined) between Burlington and the Purchaser; and

WHEREAS, pursuant to the Purchase Agreement, the Purchaser has agreed to assume certain liabilities and obligations of Burlington with respect to the Business;

NOW, THEREFORE, in consideration of the sale and assignment of the Assets constituting the Business and the payment of the Purchase Price therefor, the Purchaser and Burlington agree as follows:

- A subject to Sections 2 and 3 hereof, the Purchaser hereby assumes and agrees to pay, perform and discharge, and to indemnify Burlington against and hold it harmless from, any and all claims, losses, damages, costs, liabilities, expenses and obligations (referred to herein as the "Liabilities") of Burlington of whatever nature to the extent related to the Business or Assets as they existed at the Effective Time and as they have existed or shall exist after the Effective Time (whether fixed or contingent, arising by law or by contract or otherwise), whether such Liabilities arose prior to or arose or arise after the Effective Time.
- 2. The Purchaser does not assume, nor agree to pay, perform or discharge or indemnify Burlington against or hold it harmless from, any Liability of Burlington whatsoever for the following:
- (a) any Biabilities related in any way to the conduct of the operations or the operating of assets of Burlington which operations or assets are not part of the Business or the Assets as of the Effective Time;

- .. (b) any Liabilities related in any way to the employment of employees who are not Employees of the Business (other than liability with respect to any matters described in of Section 3.05 of the Disclosure Schedule);
  - (c) (i) except to the extent included in the total net assets reflected on the Audited Statement of Net Assets, any Liabilities under the Retirement System of Burlington Industries, Inc. and Affiliated Companies, the Profit Sharing Retirement Plan of Burlington Industries, Inc. and Affiliated Companies or the Profit Sharing Plan of Burlington Industries, Inc. and Affiliated Companies (collectively, the "Plans") including, without limitation, Liabilities relating to (x) contributions to such Plans, (y) an "accumulated funding deficiency" within the meaning of Section 412(a) of the Internal Revenue Code, whether or not waived, and (z) liabilities to the Pension Benefit Guaranty Corporation; and
  - (ii) except to the extent included in the total net assets reflected on the Audited Statement of Net Assets, any other Liabilities relating to compensation and benefits provided by Burlington to Employees who are employed at the Effective Time in the Business which accrued during any period of employment prior to the Effective Time, including, without limitation, any Liabilities relating in any way to noncompliance by Burlington with Section 412(a) of the Internal Revenue Code;
- (d) any Liabilities in respect of indebtedness of Burlington for borrowed money;
- (e) subject to Article VII of the Purchase Agreement and Section 3(g) hereof, any Liabilities for or relating to any and all Taxes applicable to the Business or the Assets, incurred or accrued prior to the Effective Time; and
- (f) any Liabilities of a type which would be required to be stated on the face of a balance sheet of the Business as of the Effective Date, prepared in accordance with the Division Accounting Policies, other than (i) Liabilities expressly assumed by the Purchaser under this Agreement and (ii) Liabilities included in the total net assets reflected on the Audited Statement of Net Assets.
- 3. In order to more clearly state certain of the understandings of the Purchaser and Burlington with respect to the matters set forth above, the Purchaser and Burlington further agree as follows:

- (a) The Purchaser agrees to honor, and to make payments as appropriate with respect to (i) all vacation pay and unused vacation time obligations (including payments on termination) to wage Employees accrued after the Effective Time and (ii) all unused vacation time of salaried Employees (including payments on termination), using Burlington's vacation policies as in effect as of the Effective Time.
- With respect to Liabilities set forth in Section 3.05 of the Disclosure Schedule which have been assumed by the Purchaser and are covered by insurance policies of Burlington and as to which the insurance coverage cannot be assigned to the Purchaser, the Purchaser agrees to prosecute or defend such litigation in a prudent fashion, consulting with Burlington on a regular basis, and Burlington agrees to continue as the named insured with respect to such litigation to submit timely all necessary insurance claims and other documents to pursue its claim under such insurance policies and to apply, for the benefit of the Purchaser, all proceeds of insurance remitted to Burlington with respect to each litigation matter when received. The parties hereto agree that the amount of any such Liability which is not payable under such insurance policies because it is part of the deductible amount under any such policy or exceeds the maximum coverage under any such policy shall be the responsibility of the Purchaser and the Purchaser will promptly reimburse Burlington for any amounts which are advanced for these purposes. Purchaser further agrees that it will not settle or compromise any such litigation without Burlington's advance consent, provided, however, that the Purchaser shall not be required to take any action (including the failure to act) which it deems to be illegal or inconsistent with ethical business and legal practices or which would subject the Purchaser to any additional exposure or liability other than increased retroactive premiums. All out-of-pocket costs of prosecuting or defending such litigation and all costs incurred in settlement or by judgment or order and all costs relating to increased retroactive premiums under such insurance policies shall be the responsibility of the Purchaser, and the Purchaser will promptly reimburse Burlington for any amounts which are advanced for these purposes. Burlington agrees to cooperate fully with the Purchaser in such manner and to make available to the Purchaser such of its books and records and personnel as shall be reasonably necessary to permit the Purchaser to defend such actions effectively.
- (c) With respect to claims for all other Liabilities assumed hereunder pursuant to Section 1 hereof which have been covered by insurance policies of Burlington and

as to which the insurance coverage cannot be assigned to the purchaser, Burlington agrees to submit timely all such claims for such Liabilities and all other necessary documents to the appropriate insurer to pursue such claims, and to continue as the named insured with respect to such Liabilities and to apply, for the benefit of the Purchaser all proceeds of insurance remitted to Burlington with respect to each such Liability when received. The Purchaser agrees to promptly reimburse Burlington for any amount which is advanced by Burlington for any increased retroactive premium under any such insurance policy. The Purchaser agrees to make available to Burlington such of its books and records and personnel as shall be reasonably necessary to permit Burlington to submit such claims in the manner herein described.

- (d) Burlington shall be responsible for all Liabilities arising under its medical and dental plans with respect to treatment rendered to Employees prior to the Effective Time, and the Purchaser shall assume responsibility for all Liabilities for treatment rendered to Employees after the Effective Time.
- (e) The Purchaser shall be responsible for, and, to the extent necessary, shall reimburse Burlington, for all expenses or claims of Employees for (i) mortgage interest differential payments for the period after the Effective Time, (ii) relocation expenses for such Employees in the process of moving at or after the Effective Time, including accommodation loans outstanding on the Closing Date (the notes or other evidence of which Burlington shall assign to the Purchaser), (iii) the excess of the expense advances over valid expense claims incurred through the Effective Time, and (iv) tuition aid reimbursement for the semester during which the Effective Time occurs.
- (f) Burlington shall be responsible for all costs (wages or salaries and related benefits, according to its current policies) for all employees of the Business who are on long-term leave or disabled status as of the Effective Time and their covered dependents.
- (g) The Purchaser shall be responsible for the listing and the payment of all taxes on real and personal property constituting part of the Assets or the Business, whether accruing prior to or after the Effective Time; Provided, however; that Burlington shall reimburse the Purchaser, at least five Business Days before the applicable due date for all such taxes accruing prior to the Effective Time.

- 4. This Agreement shall not be assigned by operation of law or otherwise.
- 5. This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York.
- 6. This Agreement shall survive the Closing Date without limitation.
- This Agreement may not be amended or modified except by an instrument in writing signed by Burlington and the purchaser.
- 8. Either party hereto may (i) extend the time for the performance of any of the obligations or other acts of the other party hereto, (ii) waive any inaccuracies and the representations and warranties contained herein or in any document delivered pursuant hereto, and (iii) waive compliance with any of the agreements or conditions contained herein. Any such extension or waiver shall be valid as set forth in any instrument in writing signed by the party to be bound thereby.
- 9. The headings contained in this Agreement are reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement.
- 10. If any term or other provision of this Agreement is invalid, illegal or incapable of being enforced by any rule of law or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner adverse to any party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in an acceptable manner to the end that transactions contemplated hereby are fulfilled to the extent possible.
- Agreement, constitutes the entire agreement and supersedes all prior agreements and undertakings, both written and oral, between Burlington and the Purchaser with respect to the subject matter hereof, and, except as otherwise expressly provided herein, are not intended to confer upon any other person any rights or remedies hereunder.

12. This Agreement may be executed in one or more counterparts, and by the different parties hereto in separate counterparts, each of which when executed shall be deemed to be an original, but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the day and year first above written.

BGF INDUSTRIES, INC.

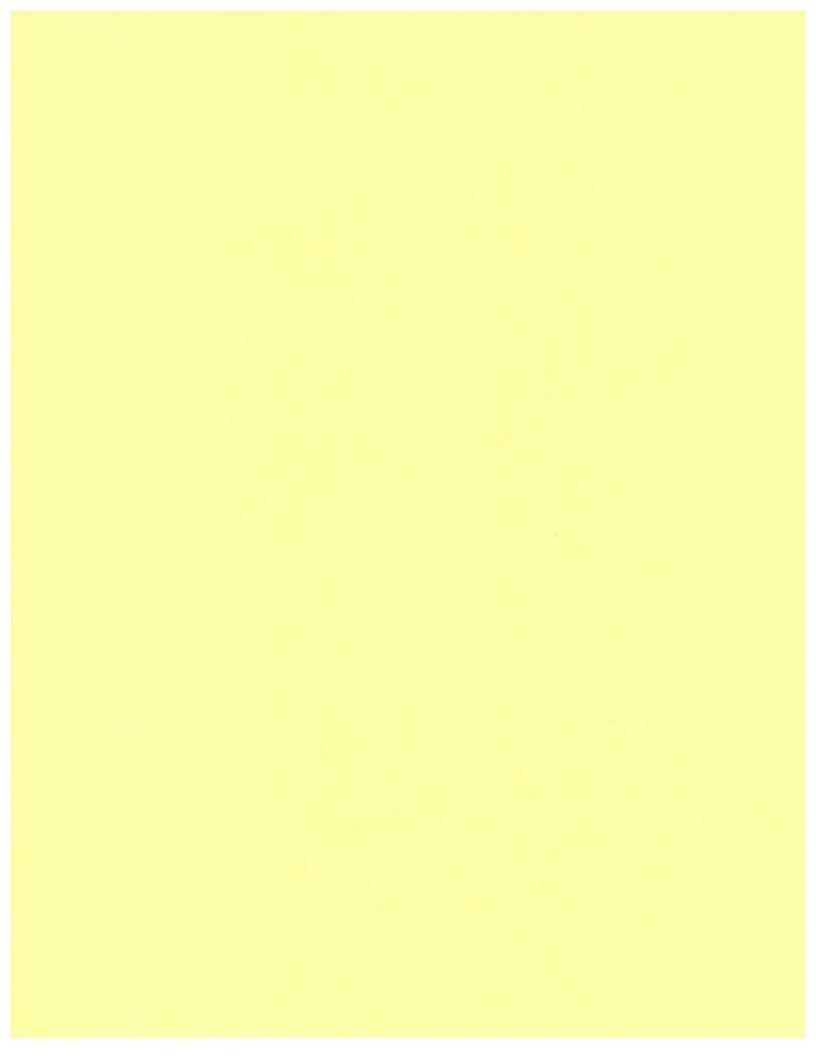
By

Title: Charman & Chief Executive Officer

BURLINGTON INDUSTRIES, INC.

Đγ

Title



## ATTACHMENT C

### WILLIAMS MULLEN

Ethan R. Ware Direct Dial: 803.567.4610 eware@will.amsmullen.com

October 4, 2016

### VIA ELECTRONIC MAIL & U.S. MAIL

Robby Dunnagan
President
BGF Industries, Inc.
3802 Robert Porcher Way
Greensboro, North Carolina 27410

Re: Notification of Liability

Former Burlington Industries, Inc. Site Chesterfield County, South Carolina

Dear Mr. Dunnagan:

We represent Highland Industries, Inc. ("Highland"). We are writing to notify BGF Industries, Inc. ("BGF") and related entities of potential liability for contamination of residences and industrial properties at or near Cheraw, South Carolina, and request your participation at a meeting with the South Carolina Department of Health and Environmental Control (DHEC) to discuss the contamination. This is an urgent legal matter and we request it receive immediate attention.

### BACKGROUND

Former Burlington Industries, Inc. ("Burlington") owned and operated a fiberglass dyeing and finishing facility in Cheraw, South Carolina ("Site"). From 1961 to about 1970, the company discharged a "green fluid" into the Western Ditch along the Burlington property line without pretreatment; the Western Ditch drains through a nearby neighborhood ("the Neighborhood") to the Great Pee Dee River. The discharge may have reached 250,000 gallons per day (gpd). From 1970 to 1974, the Burlington Facility installed a series of pretreatment tanks, no-discharge ponds, and sludge drying beds to manage the wastewater prior to discharge to a local publicly owned treatment works (POTW). Corporate records indicate Burlington conveyed the Cheraw fiberglass business to BGF, and in 1988, Highland purchased the plant and remaining textile industrial fabrics business.

On September 16, 2016, Highland received the enclosed DHEC General Notice Letter ("Highland Letter"). [Attachment A]. The Letter states DHEC discovered high levels of polychlorinated biphenyls (PCBs) and pesticides throughout the Neighborhood adjoining the Western Ditch, the former Burlington plant Site, and the area where wastewater ponds and sludge drying beds existed. DHEC reported the PCB levels in the Neighborhood adjoining the former Burlington Site are the highest ever recorded in the State of South Carolina. Leaflets provided to residents in the area state the toxicological risks of PCBs to human health and warn residents of the Neighborhood not to enter contaminated areas. [Attachment B].

### NOTIFICATION OF LIABILITY

Pursuant to The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as the federal "Superfund" law, DHEC and EPA are responsible for responding to the release or threat of release of hazardous substances, pollutants, or contaminants into the environment. PCBs and pesticides detected at the Site and the Neighborhood are listed as hazardous substances. EPA and DHEC documented the release of PCBs and pesticides occurred at the Site and spent, or is considering spending, public funds to investigate and control releases of hazardous substances or potential releases of hazardous substances at the Site.

Based on information presently available, Highland has determined your company may be responsible under CERCLA for cleanup of the Site or costs EPA and DHEC incurred investigating the Site. Under CERCLA, specifically Sections 106(a) and 107(a), potentially responsible parties (PRPs) may be required to perform cleanup actions to protect the public health, welfare, or the environment. PRPs may also be responsible for costs incurred by EPA or a State cleaning up the Site, unless the PRP can demonstrate divisibility or assert one of the statutory defenses. PRPs include current and former owners and operators of a Site, successors in interest to former owners or operations of a Site, and persons who arranged for treatment and/or disposal of any hazardous substances found at the Site.

Based on the information collected, Highland believes BGF may be liable under Section 107(a) of CERCLA with respect to the Site, as an (1) arranger, who by contract or agreement, arranged for the disposal, treatment, or transportation of PCBs and pesticides at the Site or (2) current or previous owner and/or operator of the Site as a successor to Burlington.

To date, DHEC and EPA have undertaken the following response action[s] at the Site under the authority of the Superfund Program:

- 1. Site Reconnaissance (January, 2016);
- 2. Sediment and Soil Sampling and Analysis (August 12, 2016) [Attachment C]
- 3. Supplemental Sampling and Analysis (September 12, 2016); and
- Notifications of PCB Results to specific residents in the Neighborhood (September 16, 2016) [Attachment D].

### REQUESTED ACTION

A meeting is scheduled October 13, 2016, at 10:00 A.M. with Sarah Bazemore, Esquire, Assistant General Counsel, DHEC, to discuss the response action and related information to the release of PCBs and pesticides at the former Burlington plant site. We request you or your representative be present. DHEC is located at the following address:

South Carolina Department of Health and Environmental Control 2600 Bull Street Columbia, South Carolina

We understand EPA and DHEC intend to initiate immediate response actions in the Neighborhood, if BGF and/or Highland are not willing to meet or unable to participate in discussions on the Site.

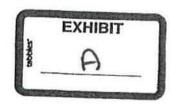
Page 3

Please feel free to have your legal advisors contact us, if there are any questions. We would appreciate you letting us know if BGF intends to participate in the October 13, 2016, DHEC meeting before close of business on October 11, 2016.

Sincerely,
WILLIAMS MULLEN
Shan R. Wan

ERW:kc Attachments





September 16, 2016

Via Email and US Mail

Ms. Cheryl D. Malloy Vice President, EHS TK Holdings, Inc. 1350 Bridgeport Drive, Suite 1 Kernersville, NC 27284

Re: Highland Industries Facility (former Burlington Industries Cheraw) Site

**General Notice Letter** 

Chesterfield County, South Carolina

Dear Ms. Malloy:

Thank you for taking the time on Monday to discuss the South Carolina Department of Health and Environmental Control's (the Department) ongoing investigation of the release of hazardous substances, pollutants, or contaminants at and in the vicinity of the Highland Industries, Inc., Cheraw (former Burlington Industries Cheraw) facility (or Site) located at 650 Chesterfield Highway, Cheraw, SC. As we discussed, the Department's ongoing environmental investigation has identified high levels of polychlorinated biphenyls (PCBs) and pesticides at numerous locations, including soils on the facility property, at multiple nearby residences, and in sediments of the drainage ditch/creek which originates from the northwest portion of the facility and heads downgradient to the north of the facility. Based on these findings, the Department has determined the Site meets the National Oil and Hazardous Substances Pollution Contingency Plan (NCP, 40 CFR, part 300) criteria for a time-critical removal action. For your information, a copy of the Department's sampling results and a KMZ file with sampling locations will be forwarded to you electronically.

As we discussed, the Department is continuing to investigate the extent of PCB and pesticide contamination and will be collecting additional samples during the week of September 19, 2016. The Department is also investigating the ability and willingness of persons connected with the contamination to perform additional response/cleanup actions.

### General Notice of Potential Liability

This letter is to notify you of potential liability that Highland Industries, Inc., and TK Holdings, Inc., and any parent, subsidiary, successor, predecessor, or related parties (hereinafter collectively referred to as "Highland" or "Takata") may incur or may have incurred with respect to the Site. Based on information received during the investigation of the Site, the Department

Ms. Cheryi D. Malloy September 16, 2016 Page 2

believes that Highland may be a responsible party under CERCLA § 107(a), 42 U.S.C. § 9607(a). Liability is defined by CERCLA § 107(a), as adopted by the South Carolina Hazardous Waste Management Act, S.C. Code Ann. § 44-56-200. Potentially Responsible Parties (PRPs) under CERCLA and state law generally include the following: 1) the current owners and operators of the facility; 2) any person who at the time of disposal of any hazardous substances owned or operated any facility at which hazardous substances were disposed of; 3) any person who by contract, agreement, or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by such person or by any other party or entity at the facility; and 4) any person who accepts or accepted any hazardous substances for transport to disposal or treatment facilities and selected such facilities.

This letter also provides notice to Highland that, due to the time-critical nature of the response actions, the Department is **not** using the special notice procedures of CERCLA § 122(e), 42 U.S.C. § 9622(e) to formally negotiate terms of an agreement or settlement to conduct site response activities. As we discussed on the phone, the Department is interested in meeting with Highland to discuss the findings of our investigation and the potential involvement of Highland in future response actions. The Department suggests meeting during the week of September 19 and will be in contact to coordinate a date and time.

Because the Site poses a hazard to human health and the environment, the Department recommends that you give this matter your immediate attention. Should Highland wish not to address the contamination at the Site, the Department will evaluate other alternatives for addressing the Site through the State and Federal Superfund Programs.

If you have any questions regarding this matter, you may contact me at 803-898-0778 or Ken Taylor at 803-898-0835. Thank you for your attention to this issue.

Very truly yours,

R. Gary Stewart, P.E., Manager

R. Dary Stwirt

State Remediation Section

Bureau of Land and Waste Management

Cc: Buck Graham, Pee Dee Regional Office

G. Kendall Taylor, BLWM Judy Canova, BLWM David Wilkie, BLWM Sara Bazemore, OGC BLWM File 58341

Total PCBs Lab results (ppm)	Arolclor 1254 (Lab ppm)	Aroclor 1248 (Lab ppm)	PCB Screening Results (ppm)	Chloride Reading	Date	Sample Location ID
0.000			10.6	4.8	8/22/2016	Blank 000
0.000			2.3	1.04	8/22/2016	SAND
910.000	360.000	550.000	110	49.7	8/22/2016	BL-SD-01
0.000			138	62.4	8/22/2016	BL-DS-01
160.000		160.000	*12.1	5.46	8/23/2016	BL-SD-1B
230.000		230.000	48.6	21.9	8/23/2016	BL-DS-1B
0.000			36.0	16.2	8/22/2016	BL-SD-02
0.000			45.2	20.4	8/22/2016	BL-DS-02
0.000			51.4	23.2	8/23/2016	BL-SD-2B
0.000			40.9	18.4	8/23/2016	BL-DS-2B
0.000			56.6	NA	8/22/2016	BL-SD-03
0.000			42.8	19.3	8/22/2016	BL-DS-03
500.000	240.000	260.000	79.1		8/22/2016	BL-SD-04
1010.000	450.000	560.000	76.3	34.4	8/22/2016	DS-04 DU
1510.000	730.000	780.000	161	72.9	8/22/2016	BL-DS-04
300.000	150.000	150.000	147	66.4	8/22/2016	BL-SD-05
0.000			153	69.0	8/22/2016	BL-DS-05
1660.000	660.000	1000.000	240	108	8/22/2016	BL-SD-06
2780.000	880.000	1900.000	547	247	8/22/2016	BL-DS-06
0.000			173	78.4	8/23/2016	BL-SD-07
0.000			175	79.1	8/23/2016	BL-DS-07
0.000			73.1	32.9	8/23/2016	BL-SD-08
0.000		10.00	77.1	34.8	8/23/2016	BL-DS-08
600.000	260.000	340.000	169	76.5	8/23/2016	BL-SD-09
2010.000	710.000	1300.000	528	238	8/23/2016	BL-DS-09
0.000			31.1	14	8/23/2016	BL-SD-10
0.000			82.0	37	8/23/2016	BL-DS-10
0.000			68.5	30.9	8/23/2016	BL-SD-11
0.000			23.6	NA	8/23/2016	BL-DS-11
0.000			54.2	24.4	8/25/2016	BL-SS- 11A
0.000			3.87	1.74	8/25/2016	BL-SB- 11A
0.000			1.34	0.6	8/23/2016	BL-SD-12
0.000			2.34	1.05	8/23/2016	BL-DS-12
183.000	73.000	110.000	30.8	13.9	8/23/2016	BL-SD-13
137.000	56.000	81.000	99.7	44.9	8/23/2016	BL-DS-13

0.000			37.6	16.9	8/23/2016	BL-SD-14
85.000		85.000	110	49.8	8/23/2016	BL-DS-14
0.000			28.8	13	8/23/2016	BL-SD-15
0.000			37.8	17	8/23/2016	BL-DS-15
159.000	70.000	89.000	*37.7	17	8/23/2016	BL-SD-16
0.000			*43.3	19.5	8/23/2016	BL-DS-16
0.000			15.4	6.95	8/23/2016	BL-SD-17
0.000			28.7	12.9	8/23/2016	BL-DS-17
250.000		250.000	11.9	5.37	8/23/2016	BL-SD-18
192.000	82.000	110.000	76.1	34.3	8/23/2016	BL-DS-18
0.100		0.100	2.49	1.12	8/23/2016	BL-SD-19
0.092	0.045	0.047				BL-SD-19 DUP?
0.067		0.067	2.95	1.33	8/23/2016	BL-DS-19
0.000			1.75	0.79	8/23/2016	POOP-19
0.000			*1.45	0.65	8/23/2016	BL-SD-20
0.000			*4.5	2.03	8/23/2016	BL-DS-20
0.000			2.24	1.01	8/23/2016	BL-SD-21
0.000			2.23	1.00	8/23/2016	BL-DS-21
0.000			*1.79	0.8	8/24/2016	BL-SD-22
0.000			3.63	1.63	8/23/2016	BL-DS-22
0.000			2.29	1.03	8/23/2016	BL-SD-23
0.000			2.31	1.04	8/23/2016	BL-DS-23
0.000			2.64	1.19	8/23/2016	BL-SD-24
0.000			1.60	0.72	8/23/2016	BL-DS-24
0.000			2.73	NA	8/24/2016	BL-SB-24
0.000			2.75	1.24	8/23/2016	BL-SD-25
0.000			2.48	1.12	8/23/2016	BL-DS-25
0.000			DNM	NA	8/24/2016	BL-SD-26
0.000			DNM	NA	8/24/2016	BL-DS-26
0.000			6.00	2.71	8/24/2016	BL-SS- 27A
0.000			6.78	3.06	8/24/2016	BL-SB- 27A
0.000			4.64	2.09	8/24/2016	BL-SB- 27A-24

0.000			10	4.52	8/24/2016	BL-SS- 27B
0.000			2.00	0.9	8/24/2016	BL-SB- 27B
0.000			2.59	1.17	8/24/2016	BL-SS- 27C
0.000			3.26	1.47	8/24/2016	BL-SB- 27C
105.000	37.000	68.000	11.4	5.14	8/24/2016	BL-SS- 27D
0.000			10.8	4.91	8/24/2016	BL-SB- 27D
0.000			10.5	4.76	8/24/2016	BL-SS- 27E
0.000			5.5	2.48	8/24/2016	BL-SS- 27F
0.000			4.01	1.81	8/24/2016	BL-SB- 27F
0.000			3.83	1.73	8/24/2016	BL-SB- 27G
2800.000	1300.000	1500.000	301	136	8/24/2016	BL-SS-28
149.000	67.000	82.000	202	91.3	8/24/2016	BL-SB-28
0.000			1.70	0.77	8/24/2016	BL-SS-29
0.000			1.50	0.67	8/24/2016	BL-SB-29
0.000			2.11	0.95	8/24/2016	BL-SS- 30A
0.000			*1.73	0.78	8/24/2016	BL-SB- 30A
0.000			*1.75	0.79	8/24/2016	BL-SS- 30B
0.000			3.01	1.36	8/24/2016	BL-SB- 30B
0.000			3.59	1.62	8/24/2016	BL-SS-31
0.000			2.55	NA	8/24/2016	BL-SB-31
0.000			*6.82	NA	8/24/2016	BL-SS-32
0.000			*5.76	2.6	8/24/2016	BL-SS-33
0.000			2.24	NA	8/24/2016	BL-SB-33
0.000			11.6	5.27	8/24/2016	BL-SS-34
0.000			5.59	2.52	8/24/2016	BL-SB-34

0.000			2.58	1.16	8/24/2016	BL-SS-35
0.000			5.23	2.35	8/24/2016	BL-SB-35
0.000			1.99	0.9	8/24/2016	BL-SS-36
0.000			**64.4	NA	8/24/2016	BL-SB-36
0.000			0.42	0.19	8/24/2016	BL-SS-37
0.000			2.39	1.08	8/24/2016	BL-SB-37
0.000			3.00	1.35	8/24/2016	BL-SS-38
0.000			3.76	1.69	8/24/2016	BL-SB-38
0.047	0.027	0.020	19.4	8.79	8/24/2016	BL-SS-39
0.000			1.43	NA	8/24/2016	BL-SB-39
0.000			2.62	1.18	8/24/2016	BL-SS-40
0.000			6.19	2.79	8/24/2016	BL-SB-40
0.000			3.75	1.69	8/24/2016	BL-SS-41
0.000			2.93	1.32	8/24/2016	BL-SB-41
0.000			4.59	2.07	8/24/2016	BL-SS-42
0.000			4.50	2.03	8/24/2016	BL-SB-42
0.000			3.76	1.69	8/24/2016	BL-SS-43
0.000			3.17	1.43	8/25/2016	BL-SB-43
0.000			6.24	2.81	8/25/2016	BL-SS-44
0.000			1.66	0.75	8/25/2016	BL-SB-44
0.000			2.57	1.16	8/25/2016	BL-SS-45
0.000			3.04	1.37	8/25/2016	BL-SB-45
0.000			4.42	1.99	8/24/2016	BL-SS-46
0.000			4.27	1.92	8/24/2016	BL-SS-47
0.000			2.76	1.24	8/24/2016	BL-SB-47

1080.000	590.000	490.000	66.7	30.1	8/25/2016	BL-SS-48
12.800	7.900	4.900	2.95	1.33	8/25/2016	BL-SS- 48A
10.800	6.700	4.100	3.09	1.39	8/25/2016	BL-SS- 48B
0.000			1.41	0.63	8/25/2016	BL-SS-51
104.000	63.000	41.000	7.79	3.51	8/25/2016	BL-SS-52
220.000	110.000	110.000	3.21	1.44	8/25/2016	BL-SS- 52A
0.000			1.69	0.76	8/25/2016	BL-SS- 52B
0.000			2.22	1.00	8/25/2016	BL-SS- 52B
90.000	48.000	42.000	35.8	16.1	8/25/2016	BL-SS-53
0.000			1.33	0.6	8/25/2016	BL-SS- 53A
0.000			1.65	0.74	8/25/2016	BL-SS-54
0.000			1.70	0.76	8/25/2016	BL-SS-55
8.200	3.700	4.500	1.77	0.79	8/25/2016	BL-SS-57
19.400	7.400	12.000	8.52	3.84	8/24/2016	BL-SS-58
0.033	0.033		3.30	1.49	8/24/2016	BL-SS-59
<0.11	<0.011	<0.011	1.98	0.89	8/25/2016	BL-SS-63
0.000			2.45	1.1	8/24/2016	BL-SB-63
0.000			3.50	1.58	8/25/2016	BL-SS-66
3.900	2.200	1.700	3.55	1.6	8/24/2016	BL-SS-67
2.800	1.600	1.200			8/24/2016	BL-SS-67 DUP
0.000			5.98	2.7	8/24/2016	BL-SB-67
85.000	48.000	37.000	2.92	1.32	8/25/2016	BL-SS-70
2.400	2.400		*4.09	1.84	8/25/2016	BL-SS-73
7.400	5.300	2.100	*6.64	2.99	8/25/2016	BL-SS-74
340.000	180.000	160.000	64	28.9	8/25/2016	BL-SS-75

5.000	2.900	2.100	2.64	1.19	8/25/2016	BL-SS- 75A
2.410	1.800	0.610	3.56	1.6	8/25/2016	BL-SS- 75B
0.088	0.088		2.24	1.01	8/25/2016	BL-SS- 75C
1.020	0.610	0.410	3.00	1.35	8/25/2016	BL-SS- 75D
0.000			2.56	1.15	8/24/2016	BL-SD-76
0.000			3.41	1.54	8/24/2016	BL-DS-76
0.000			*9.83	4.43	8/24/2016	BL-SD-77
0.000			3.99	1.8	8/24/2016	BL-DS-77
0.000			1.29	0.58	8/25/2016	BL-SB-78
0.000			*1.29	0.58	8/25/2016	BL-SS-79
0.000			2.11	0.95	8/25/2016	BL-SB-79
0.000			*7.47	3.37	8/25/2016	BL-SS-80
42.000	22.000	20.000	16.9	7.65	8/25/2016	BL-SB-80
0.000			1.74	0.78	8/25/2016	BL-SS-81
0.000			2.29	1.03	8/25/2016	BL-SB-81
0.000			2.17	0.98	8/25/2016	BL-SS-81 DUP
0.000			2.10	0.94	8/25/2016	BL-SS-82
0.000			8.82	3.97	8/25/2016	BL-SB-82 DUP?
0.000			2.17	0.98	8/25/2016	BL-SB-82
0.000			1.63	0.73	8/25/2016	BL-SS-83
0.000			1.83	0.82	8/25/2016	BL-SB-83
0.000			2.66	1.2	8/25/2016	BL-SS-84
0.000			*1.52	0.68	8/25/2016	BL-SS-85
0.000			1.21	0.54	8/25/2016	BL-SS-86
0.000			1.88	0.85	8/25/2016	BL-1-1
0.000			1.83	NA NA	8/25/2016	BL-1-1-2
0.000			1.43	0.64	8/25/2016	BL-1-3

0.000		1.66	0.75	8/25/2016	BL-1-4
0.000		2.27	1.02	8/25/2016	BL-1-5
0.000		1.69	0.76	8/25/2016	BL-2-1
0.000		1.75	0.79	8/25/2016	BL-2-2
0.000		2.20	0.99	8/25/2016	BL-2-3
0.000		2.27	1.02	8/25/2016	BL-2-4-5
0.000		1.66	0.75	8/25/2016	BKG-SS
0.019	0.019	1.36	0.61	8/25/2016	BKG-SD
0.015	0.015	1.70	0.76	8/25/2016	BKG-SB
0.000		NA	NA	8/25/2016	***BL-SS- XX
260.000	260.000	NA	NA	NA	BL-WA-01
14.000	14.000	NA	NA	NA	BL-WA-02
750.000	750.000				BL-WA-03





#### FORMER BURLINGTON INDUSTRIES SITE

The South Carolina Department of Health and Environmental Control (SC DHEC) is conducting soil and sediment sampling in your community. We have found contamination that is very likely the result of historical practices of waste removal from industrial processes prior to the existence of environmental regulations. This DHEC investigation is attempting to determine who may have been responsible for the contamination as well as the best way to address it and develop a clean-up plan.

We have the results of a first round of sampling and are in the process of collecting additional samples so that we can better understand the locations affected. Preliminary data has found elevated concentrations of polychlorinated biphenyls (PCBs) as well as some pesticides that are above the EPA's Residential Regional Screening Levels between Pecan Drive and the former Burlington Industrie's facility. We use screening values to determine if or where additional evaluation is needed.

When we are investigating areas of historical environmental contamination, we make recommendations to citizens about things that you can do to prevent potential future exposure(s). As a precautionary measure, if you live along the side of Pecan Drive or Robinhood Drive that backs up to the ditch, DHEC recommends the following safeguards for your family:

- Do not walk in the drainage ditch behind the houses on Pecan Drive and the houses on Robinhood Drive or let children or pets play in back yards near the drainage ditch.
- · Wash your hands before eating or sleeping, or caring for children.
- Wash your hands after playing or working in the yard.
  Don't let children eat dirt.
- Limit the amount of dust entering your home by using a doormat to wipe feet before entering.
- When mowing the lawn, avoid running the mower over patches of dirt or, alternatively, wet down dirt areas prior to mowing. Avoid mowing the area next to the drainage ditch.

DHEC is still in the Investigation phase and will be conducting additional sampling in your area the week of September 19th, 2016. Additional information will be shared with you as we continue our investigation. Once we have the results of this next round of sampling, a community meeting will be scheduled to discuss the results as well as the next steps. If . your yard has been sampled or is sampled in the future, you will receive the results as soon as they are available.

#### Polychlorinated Biphenyls (PCBs) Information Sheet

#### What are PCB's?

PCB stands for polychlorinated biphenyls. This is not one chemical, but a class made up of 209 chemicals. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. PCBs have no known taste or smell. PCBs were used in manufacturing processes from 1929 until they were banned in 1979.

#### How were PCBs used?

Historically, PCBs were used as coolants and lubricants in transformers, capacitors and other electrical equipment because they are good insulators and don't burn. PCBs were also historically used as fluids in old florescent lighting fixtures and electrical transformers, as well as in products like cutting oils, hydraulic oils, and carbonless copy paper.

In 1979, the United States banned the manufacture of PCBs because they were found to be harmful to people and the environment. However, once PCBs are in the environment, they do not break down easily and may remain where they were released for very long periods of time.

## Where are PCBs found today?

Because PCBs were used for so long prior to being regulated, low levels are found throughout the environment; typically in soils and in sediments in streams, rivers or ponds. They are sometimes found at higher levels in areas where they were disposed of prior to environmental regulations or where they have been illegally dumped.

#### How can PCBs harm me and my family?

In this situation of historical contamination, PCBs are primarily a hazard through skin contact. The precautions found on the other side of this page are ways you can reduce your potential for exposure to these chemicals. The most common health effects from exposure to PCBs is from workplace exposure (mostly historical) to the liquid oils through contact with the skin. PCBs are associated with skin rashes and a specific type of acne. Workplace exposures have also been associated with changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects.

#### Where can I find more information about PCBs?

For additional information about PCBs, potential health effects, clean-up and disposal of waste, please visit the U. S. Environmental Protection Agency's website at www.epa.gov/PCBs.

If you would like additional information about the hazards of PCB's, please refer to the full ToxFAQ sheet produced by the Centers for Disease Control and Prevention's Agency for Toxic Substances and Disease Registry located: http://www.atsdr.cdc.gov/toxfags/tfacts17.pdf



# SEDIMENT AND SOIL SAMPLING AND ANALYSIS WORK PLAN

FOR

FORMER BURLINGTON LAGOON SITE 350 CHESTERFIELD HIGHWAY CHERAW, SOUTH CAROLINA

SUBMITTED: AUGUST 12, 2016

Prepared For:

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
DIVISION OF SITE ASSESSMENT, REMEDIATION AND REVITALIZATION
BUREAU OF LAND AND WASTE MANAGEMENT
COLUMBIA, SOUTH CAROLINA

Prepared By:





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SUBMITTED: AUGUST 12, 2016

PREPARED BY:

SYNTERRA CORPORATION 148 RIVER STREET, SUITE 220 GREENVILLE, SOUTH CAROLINA



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Former Burlington Lagoon Site, 350 Chesterfield Highway, Cheraw, SC

SynTerra

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## APPENDICES

Appendix A

Dexsil L2000DX Manual

#### 1.0 INTRODUCTION

This Sampling and Analysis Plan (SAP) has been prepared specifically for the Former Burlington Lagoon site. The Former Burlington Lagoon site (Site) is adjacent to the Burlington facility (currently operating as Highland Industries) located at 350 Chesterfield Highway (Highway 9) in Cheraw, South Carolina. Figure 1 is a USGS topographic map showing the location of the Site.

A review of historical information by the South Carolina Department of Health and Environmental Control (SCDHEC) indicated the presence of structures that appear to be lagoons in an area north of the existing Highland Industries building, in a residential neighborhood. Historical information regarding the type of waste discharged to the lagoon(s) is limited, but the data suggests the lagoons were used as wastewater pretreatment settling basins and/or sludge drying beds prior to discharge of water to the city-owned wastewater treatment system. Records obtained by SCDHEC suggest that sludge accumulated in these lagoons and was alleged to be removed prior to closure of the lagoons. Samples collected from the area by SCDHEC in February of 2016 identified Polychlorinated Biphenyls (PCBs) and Polycyclic Aromatic Hydrocarbons (PAHs) in sediment and PCBs in surface and subsurface soil at concentrations greater than United States Environmental Protection Agency (USEPA) Risk Based Screening Levels (RSLs) for Residential Soil. At least one undeveloped piece of property in a nearby residential area has PCBs in surface and subsurface soil.

The Site is located in the Upper Coastal Plain Physiographic Province of South Carolina. This area is typically composed of unconsolidated sand, silt and clay. Depth to water at the Site is unknown, but is anticipated to be located between 10 to 15 feet below land surface (bls) in the shallow unconfined aquifer.

#### 1.1 Purpose

To determine the extent of PCBs and other constituents of concern (CoCs) in soil and sediment associated with the former Site, additional sediment and soil sample collection and analysis is required. On August 2, 2016, representatives of SynTerra and SCDHEC met at the Site to walk the study area and observe and note site conditions. SCDHEC identified more than 100 potential sediment and soil sample locations (Figures 2 through 4) to be screened for the presence of PCBs.

SynTerra

#### 2.0 HEALTH AND SAFETY PLAN

Prior to the commencement of field activities, SynTerra will prepare a site specific Health and Safety Plan (HASP) consistent with Occupational Safety and Health Administration (OSHA) regulations. The HASP will be used to identify potential hazards and provide procedures to safely perform work.

This HASP will be reviewed periodically. Approvals and revisions to the HASP will be recorded on the Health and Safety Plan Approval and Revision Record.

# 3.0 SEDIMENT AND SOIL SAMPLING AND ANALYSIS

Sample collection will be conducted in accordance with the USEPA Region IV Field Branches Quality System and Technical Procedures and standard SCDHEC sampling protocols. Sediment and soil samples will be collected in appropriate bottleware provided by the contract laboratory. SynTerra personnel will be responsible for proper sample preservation, sample packing, chain of custody, and delivery of the samples to the contract laboratory. A discussion of the field activities is provided below.

The specific sediment and soil samples that will be submitted for laboratory analysis will be determined in the field by the SCDHEC Project Manager based on field screening results and observations. Since this information will not be determined until the end of the sampling activities, sediment and soil samples will be placed in aluminum foil pans and mixed with a clean stainless-steel spoon until homogenized. Once the collected material has been homogenized, a sample will be collected for field screening. The remaining material will be kept in the aluminum pan, covered with aluminum foil, labeled with the sample ID, sample date, and sample time, and stored in a secure location.

After material has been collected from a sample location, a pin-flag or survey stake will be labeled with the sample location ID, as determined by the SCDHEC Project Manager, and placed at the sample location. The GPS coordinates of the actual sample location will be determined using a hand-held GPS device and will be recorded.

Based on the results from the field screening, select samples will be recovered from storage and samples will be collected in appropriate sample containers provided by the laboratory for analysis, which may include one or more of the following:

- Target Analytic List (TAL) metals plus cyanide by EPA 6010C/9012B
- TCL semi-volatile organic compounds (SVOCs) EPA 8270D
- TCL pesticides by EPA 8081B
- TCL PCBs by EPA 8082A
- PCB Congeners

Samples to be analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) will not be collected from the material collected in the aluminum pans. Rather, samples for TCL VOC analysis will be collected by returning to the original sample

location and collecting the TCL VOC sample sediment or soil directly adjacent to the original sample.

#### 3.1 Subsurface Location of Utilities

Due to the potential for underground utilities to be located at the subject site, the proposed drilling areas may be cleared by a utility location subcontractor in addition to municipal utility locators. Ground penetrating radar (GPR), electromagnetic resonance (EMR) and/or other acceptable techniques may be employed.

# 3.2 Sampling Activities

Experienced field personnel will conduct sampling activities. A copy of the sampling procedures and protocols will be provided to the sampling team and will be reviewed by that team prior to each sampling event. Personnel will wear new, disposable nitrile gloves during all sampling activities. At a minimum, the gloves will be replaced at each sample location.

# 3.2.1 Sediment Sampling

Sediment samples will be collected from the drainage bed surface (0 to 3 inch interval) and at approximately 12 inches below the drainage bed surface at each proposed location (Figures 2 through 4). Sediment samples will be collected using a clean stainless-steel shovel or hand auger. The collected sediment will be placed in a clean aluminum foil pan and mixed with a clean stainless-steel spoon until homogenized. Equipment will be decontaminated prior to use and decontaminated in the field between sample locations.

If a location is dry, a sample will be collected directly into the aluminum pan for mixing. If flowing water is present, sediment will initially be placed in a steel colander and allowed to drain. Once most of the water has been drained, the sediment will be placed in an aluminum pan for mixing.

Once the collected sediment has been homogenized, a sample will be collected for field screening and the remaining material will be stored as discussed above in Section 3.0.

Once the SCDHEC Project Manager has determined which samples will be collected for laboratory analysis, those samples will be retrieved from storage, placed in appropriate sample containers provided by the laboratory and placed on ice in a clean sample cooler. Samples for TCL VOC analysis will be collected

as discussed above in **Section 3.0**. The coolers will be placed in a secure location until shipment to the laboratory.

#### 3.2.2 Shallow Soil Sampling

Shallow soil consists of surficial soil (0 to 6 inch interval) and subsurface soil (6 to 12 inch interval). Shallow soil samples will be collected in a step-wise approach. Sampling will begin with the area where PCB concentrations have been detected above RSL and sampling will be "stepped-out" further and deeper based on results from the soil screening. The approximate location of all proposed shallow soil locations are shown on Figures 2 and 3. Not all locations may be sampled.

Shallow soil samples will be collected using a stainless-steel shovel or hand auger. The collected soil will be placed in a clean aluminum foil pan and mixed with a clean stainless-steel spoon until homogenized. Equipment will be decontaminated prior to use and decontaminated in the field between sample locations.

Once the collected soil from each interval has been homogenized, a sample will be collected for field screening and the remaining material will be stored as discussed above in Section 3.0.

Once the SCDHEC Project Manager has determined which samples will be collected for laboratory analysis, those samples will be retrieved from storage, placed in appropriate sample containers provided by the laboratory and placed on ice in a clean sample cooler. Samples for TCL VOC analysis will be collected as discussed above in Section 3.0. The coolers will be placed in a secure location until shipment to the laboratory.

#### 3.2.3 Deep Soil Sampling

Deep soil samples are considered soil samples collected from greater than two-feet bls, but shallower than the water table, which is expected to be located between 10 and 15 feet below land surface (bls). Seven soil borings locations have been identified where deep soil samples may be collected. As shown on Figures 3 and 4, five deep soil samples are located within the former lagoon area and two deep soil borings are located along the northern boundary of the plant. Due to possible concrete located within the former lagoon area, sonic drilling is proposed.

Sonic drilling works by sending high frequency resonant vibrations down the drill string to the drill bit, which fluidizes the soil particles at the drilling bit, allowing for fast and easy penetration through most geological formations. Sonic drilling is used to drill through differing lithologic formations without changing drilling equipment and can minimize investigative derived waste (IDW) generated during drilling.

Similar to Geoprobe® direct push drilling, continuous soil cores are generated. During sonic drilling, soil samples are typically collected by placing a new plastic sleeve on the inner rod of the sonic equipment, which is typically ten feet long. The diameter of the drill rods varies depending on the requirements of the project. The sonic equipment is then vibrated to the initial depth interval, retrieved and the plastic sleeve is removed and opened and a new sleeve is inserted and the sonic equipment is driven the next interval. This process is repeated until the desired depth is reached.

As with DPT drilling, upon retrieval the plastic sleeves are opened and the lithology of the soil cores are observed and described in the field. Discreet samples will be collected at two-foot intervals, placed in a clean zip-lock bag and screened in the field for volatile organics with an Organic Vapor Analyzer (OVA) or Photoionization Detector (PID).

Samples for TCL VOC analysis will be collected from each interval in appropriate containers prior to the soil being placed in a zip-lock bag, placed in a sample cooler on ice, and stored in a secure location. The remaining soil from each interval, after being screened for organics, will be placed in a clean aluminum foil pan and mixed with a clean stainless-steel spoon until homogenized. Equipment will be decontaminated prior to use and decontaminated in the field between sample locations.

Once the collected soil from each interval has been homogenized, a sample will be collected for field screening and the remaining material will be stored as discussed above in Section 3.0.

Once the SCDHEC Project Manager has determined which samples will be collected for laboratory analysis, those samples will be retrieved from storage, placed in appropriate sample containers provided by the laboratory and placed on ice in a clean sample cooler. The coolers will be placed in a secure location until shipment to the laboratory.

After the soil samples have been collected, each boring will be backfilled with bentonite pellets which will be hydrated with clean potable water to seal the bore hole.

# 3.3 Field Screening Procedures

Sediment and soil samples collected for field screening will be screened using the Dexsil L2000DX PCB/Chloride Analyzer. The L2000DX PCB/Chloride Analyzer is a portable field instrument incorporating an ion specific electrode that can quantify chlorinated compounds in all types of soil. Field screening of soil samples will be conducted in accordance with the manufacturer's guidelines. A copy of the L2000DX PCB/Chloride Analyzer manual is provided in Appendix A.

In general, 10 grams of material will be required for analysis. According to the manufacturer, wet samples can interference with the reagents and result in a lower than actual PCB concentration. As such, wet samples (soil or sediment) will need to be dried prior to field screening. To accomplish this, SCDHEC will provide an oven and cooking equipment to dry out the samples.

Results from the field screening will be recorded on a summary table and will be used by the SCDHEC Project Manager to determine which samples will be submitted to the laboratory for analysis.

#### 3.4 Chain-of-Custody Procedures

The handling of samples will be traceable from the time of collection to the time of final sample disposition by the use of chain-of-custody procedures. Field sampling personnel will be responsible for collecting the samples and for logging the samples into assigned field notebooks or a sample collection log. The field sampling personnel will complete and verify the chain-of-custody forms. The laboratory sample custodian and analysts will be responsible for custody of samples at the laboratory.

Prior to collecting samples in the field, the sampling personnel will obtain the sample bottles necessary for sampling. A self-adhesive sample label will be affixed to each sample bottle before sample collection. The field sampler will complete the label with the appropriate information using waterproof ink. At a minimum, the sample label will contain the following information:

- Client Job Name/Project Number
- Sample Identification

- Date and Time Collected (except for duplicate samples)
- Sampler's Signature (or initials)
- Required Preservatives

Chain-of-custody forms will accompany the sample containers to document the transfer of the containers and samples from the originating laboratory through the field and to the laboratory receiving the samples for analyses. A sample container is under custody in the field if the following conditions exist:

- It is in the field investigator's actual possession.
- 49 It is in the field investigator's view, after being in his/her physical possession.
- It was in the field investigator's physical possession and then she/he secured it to prevent tampering.
- It is in a secure area restricted to authorized personnel only.

The field sampling personnel will complete and verify the chain-of-custody forms.

For shipment to the laboratory, shipping containers will be sealed and accompanied by the chain-of-custody record, with appropriate signatures. The transfer of custody is the responsibility of the field sampling personnel and the laboratory. Upon receipt by the laboratory, a sample custodian will inspect the condition of the samples, check the temperature of the sample cooler, reconcile the sample(s) received against the chain-of-custody record, log in the sample(s) in the laboratory sample tracking system, and store the sample(s) in a secured sample storage area maintained at a temperature between 0° and 4° Celsius (C) until assigned to an analyst for analysis.

## 3.5 Sample Handling and Analysis

Sample containers, preservation methods, and holding times that meet USEPA standards will be used. Samples will be collected in new, preserved containers provided by the contract laboratory. Sample containers will be pre-preserved by the laboratory, as may be required by the analytical methodology.

The preferred method of transfer of samples to the laboratory will be via laboratory courier. If a courier is not available and the samples need to be shipped to the laboratory via commercial carrier, the following procedure will be implemented:

#### Step Procedure 1. Collect and seal the samples as outlined in this plan. 2. Place sample containers in laboratory shipping container(s). Samples will be packed securely with packing material to protect the sample containers from accidental breakage during shipment and to prevent a leak or spill. 3. Fill shipping container with enough ice to last the trip. Place ice in sealed plastic bags around sample containers. 4. Complete the chain-of-custody form(s). 5. Place the chain-of-custody form in a sealed plastic bag and place inside the shipping container. 6. Seal shipping container using packing tape or duct tape. 7. Deliver or ship to the laboratory. Fastest available shipping methods will be used whenever required by short holding times or project

# 3.6 Analytical Methods

schedules.

The laboratory performing the analyses will use the most current approved version of USEPA analytical methods. The record of laboratory analyses shall include the methods used (by number), the sample preparation date (if applicable), and the date of actual analysis. Data from samples that are not analyzed within the recommended holding times will be considered suspect. Any deviation from USEPA-approved method shall be adequately tested to ensure that the quality of the results meets the performance specifications (e.g., detection limit, sensitivity, precision, accuracy) of the reference method. A planned deviation shall be justified and submitted for approval by SCDHEC.

#### 3.7 Waste Materials Containment and Disposal

Investigation derived waste materials (IDW) generated during field activities will be characterized for disposal in accordance with applicable regulations. In order to minimize the quantity of IDW generated during field activities, sediment and soil with field screening PCB concentrations less than 1 part per million (ppm) and not submitted for laboratory analysis, will be placed back in the sample location from where they were collected. If a sediment or soil sample has a screening value greater than 1 ppm, and not submitted for laboratory analysis, that material will be placed in an appropriate container for proper off-site disposal. Empty used sample containers and aluminum

pans, along with used gloves, paper towels and other items used during collection activities, will be disposed as trash.

Since groundwater sampling will not be collected during field activities, the only water anticipated to be generated will be from equipment decontamination activities. Decontamination water will be containerized and disposed off-site at a licensed disposal facility. Proper waste manifests will be maintained during the transportation and disposal of the IDW.

#### 3.8 Decontamination

Proper decontamination of sampling equipment is essential to minimize the possibility of cross contamination of samples. Previously used sampling equipment will be decontaminated before sampling and between the sample collection.

Sampling equipment that is not dedicated to a single purpose will be decontaminated according to the following procedure:

#### Step Procedure

- Clean with tap water and laboratory detergent using a brush, if necessary to remove particulate matter and surface films
- 2. Rinse thoroughly with tap water
- 3. Rinse thoroughly with deionized water
- Rinse twice with pesticide-grade isopropanol
- Rinse thoroughly with organic-free water
- Allow to air dry; wrap with aluminum foil and then with plastic (if desired) if equipment is not used that day, otherwise, wrap in aluminum or plastic to minimize the possibility of contamination if equipment is going to be stored or transported

Spent decontamination fluids will be contained in an appropriate container(s) and disposed of at the off-site treatment facility.

# 4.0 QUALITY ASSURANCE/QUALITY CONTROL

To assess and verify the performance of the field sampling and laboratory techniques, the following quality control procedures will be followed.

# 4.1 Duplicate Sample

One duplicate sample will be collected at random for every 10 samples (10 percent). This applies to the samples collected for field screening as well as laboratory analysis. Field duplicate samples are taken within five minutes of collecting the original samples and include all the sub-samples. A new sample is collected from the sampling point for the field duplicate. The samples are shipped to the laboratory with the other sample bottles for analysis. The precision resulting from analysis of field duplicates is a function of the variance of sample composition, the variance of the sampling technique, and the variance of laboratory analysis.

#### 4.2 Field Equipment Blank

One field equipment blank will be collected each day of sampling activities. Field equipment blanks will be an aqueous sample of distilled or de-ionized water that is analyte-free collected during sediment sampling to assess potential contamination of samples from the Site environment and sampling equipment. The blank water will be poured over/through the sampling equipment (i.e. hand auger bucket or stainless steel shovel) and collected in the appropriate sample bottle. Field blanks will be analyzed for the full suite of analytical parameters.

## 4.3 Trip Blank

A trip blank of deionized water sealed in 40-milliliter VOC vials at the laboratory will be shipped with the sample bottles to the field and back to the laboratory. One trip blank will accompany each VOC sample cooler submitted to the laboratory. Other appropriate sample containers may be used at the discretion of the laboratory. Analytical results from trip blanks will be used to evaluate contamination introduced by laboratory equipment and sample handling and transportation procedures. Trip blanks will be analyzed for TCL VOCs only.

#### 4.4 Laboratory Quality Assurance/Quality Control

Samples from the Former Burlington Lagoon Site will be analyzed by a qualified commercial environmental laboratory licensed in South Carolina. At a minimum, laboratory quality control will include analysis of method blank samples, laboratory control samples, and matrix spike samples.

SynTerra

#### 4.5 Data Validation

Laboratory analytical data will be reviewed for precision, accuracy, and completeness in accordance with the permit requirements, the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (USEPA-540-R-08-01, June 2008), Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (EPA540/R-10/011, January 2010), and the most recently promulgated versions of the analytical methods.

After receipt of the laboratory analytical results, the data package will be reviewed for completeness to verify the appropriate samples were collected and the requested analyses performed. The sample collection logs will be reviewed and compared to the chain-of-custody documentation to verify collection information is properly transcribed. The chain-of-custody forms will be verified against the laboratory sample check-in documentation.

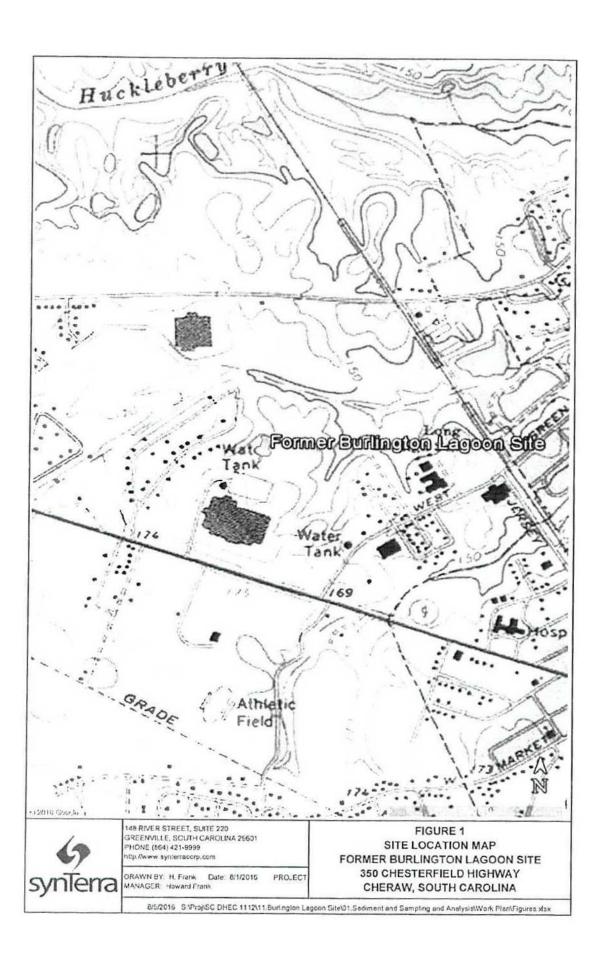
Laboratory batch quality control data will be evaluated for precision, accuracy, and completeness. Trip blank and equipment blank data will be reviewed to verify no contamination was present.

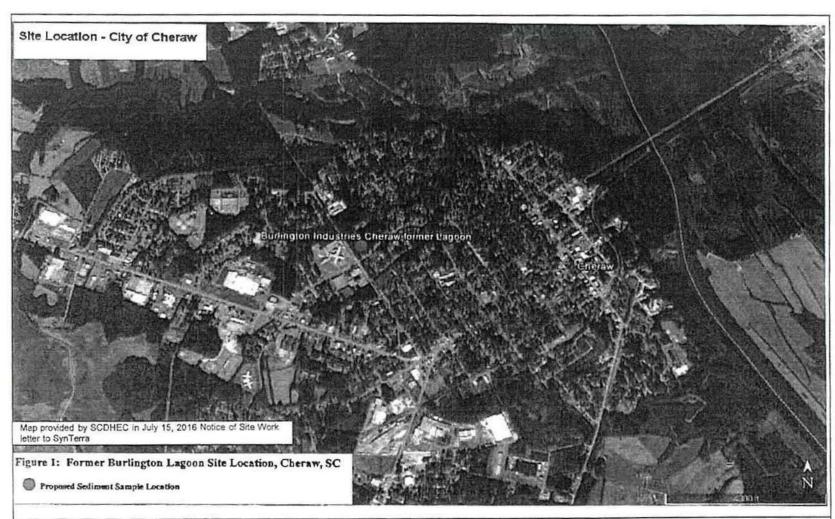
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#### 5.0 REFERENCES

- SCDHEC, May 2015, Quality Assurance Program Plan for the Underground Storage Tank Management Division, Revision 3.
- SCDHEC, July 15, 2016, Notice of Site Work, Letter from G. Ken Taylor (SCDHEC) to Kathryn Webb (SynTerra).
- US EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (USEPA-540-R-08-01, June 2008)
- US EPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (EPA540/R-10/011, January 2010)
- US EPA, Region IV Field Branches Quality System and Technical Procedures.





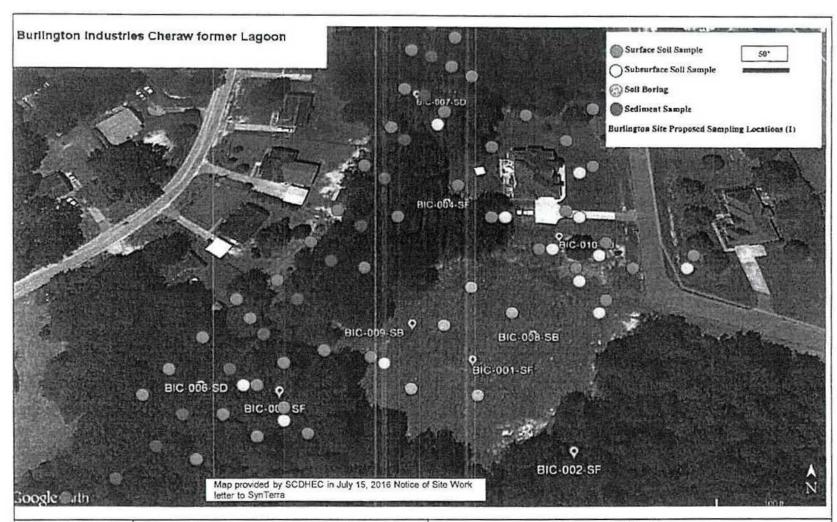




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DRAWN BY; H. Frank Date: 8/1/2016 PROJECT MANAGER: Howard Frank FIGURE 2
PROPOSED SAMPLE LOCATION MAP-BACKGROUND
FORMER BURLINGTON LAGOON SITE
350 CHESTERFIELD HIGHWAY
CHERAW, SOUTH CAROLINA

8/5/2015 S \Proj\SC DHEC.1117/11 Burlington Lagoon Site\01.Sediment and Sampling and Analysis\Work Plan\Figures x/sx

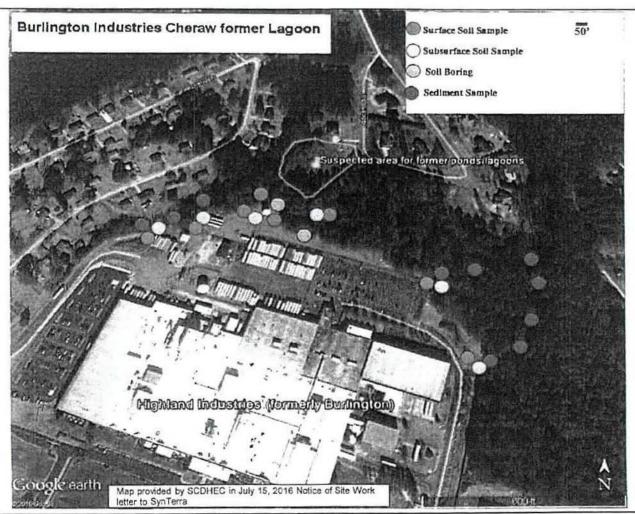




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DRAWN BY: H. Frank Date: 8/1/2016 PROJECT MANAGER: Howard Frank FIGURE 3
PROPOSED SAMPLE LOCATION MAP-LAGOON AREA
FORMER BURLINGTON LAGOON SITE
350 CHESTERFIELD HIGHWAY
CHERAW, SOUTH CAROLINA

8/5/2016 StProjSC DHEC. 11/2\11 Burlington Lagoon Stel01. Sediment and Sampling and Analysis Work Plan Figures adsx





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DRAWN BY: H. Frank Date: 8/1/2018 PROJECT MANAGER: Howard Frank FIGURE 4
PROPOSED SAMPLE LOCATION MAP-PLANT AREA
FORMER BURLINGTON LAGOON SITE
350 CHESTERFIELD HIGHWAY
CHERAW, SOUTH CAROLINA

8/5/2015 S: Proj.SC DHEC.1112\11.Burlington Lagoon Site\01.Sediment and Sampling and Analysis\Work Plan\Figures.stax



# TABLE 1 Summary of PCB Field Screening Information Former Burlington Lagoon Site Cheraw, South Carolina

Sample Location ID	Date	Time	Latitude	Longitude	Sample Type (Sediment/Soil)	Sample Depth (feet bis)	PCB Screenin Results (ppm
SS-01-0-6	7/26/2016	11:00	34.698065	-79.912932	Sediment	0 to 0.5	2.5
					-		

Notes:

1) Coordinates based on hand-held GPS device.

# APPENDIX A DEXSIL L2000DX MANUAL

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# Introduction to the L2000DX Analysis System

Congratulations on your purchase of the L2000DX Analyzer, a versatile analysis system suitable for the analysis of a wide variety of chlorinated organic compounds in a variety of matrices. The basic principal of the L2000DX system is to measure the total organic chlorine content of a sample and equate that to an equivalent concentration of the target or expected analyte. If all of the organic chlorine present is assumed to be derived from the target analyte, then an upper limit is established for the compound in question. (If other organic chlorines are present, in addition to the target analyte, they will be counted as the target analyte.) To accomplish this, all of the organically bound chlorine must be converted into inorganic chloride and the resulting chloride quantified. Once the total chlorine content of the sample is known, a conversion factor is used to convert the chloride concentration into an equivalent concentration of the target analyte. If the contaminant is known, the resulting concentration estimates will accurately correlate with the actual concentration of the analyte in the sample as determined by GC analysis in the lab. If the contaminant is unknown, a conservative or worst case conversion factor is chosen to provide an upper limit for the concentration of the target analyte in the sample.

There are three basic steps involved in the chemical analysis for total halogen by the L2000DX:

- Sample Preparation
- Conversion to Inorganic Chloride
- Quantification

The sample preparation step determines the type of chlorine detected, i.e., organic, inorganic, or total, and is matrix dependent. The sample preparation can be as simple as collecting a transformer oil sample, or can involve the extraction of a soil or water sample. In the case of a wipe sample, the surface is wiped and the wipe-gauze is extracted. The steps involved in the conversion to inorganic chloride reaction and the chloride quantification are the same for all matrices. The steps in the conversion to inorganic chloride involves the reaction of the sample with metallic sodium and the extraction of the resulting chloride into an aqueous buffer system. A chloride specific electrode is used to quantify the extracted chloride. Using stored conversion factors, the chloride value is then converted to an equivalent concentration of analyte.

#### Sample Preparation

The L2000DX can be used to analyze the following matrices:

- Transformer Oil
- Soil
- Water
- Surface Wipe

Each matrix requires different preparation prior to the conversion reaction step and subsequent quantification. Each of the matrix preparation steps are described in detail under Sample Preparation.

The routine analysis of transformer oil requires no sample preparation other than to collect a clean sample without introducing any extraneous sources of chloride into the sample, such as perspiration or road salt. This is important because, for transformer oil, there is no sample cleanup procedures to remove inorganic chloride contamination. Once collected the sample is reacted and the resulting chloride is extracted and quantified.

The chlorine quantified in this case is the total chlorine contained in the sample. Transformer oil is typically free of inorganic chlorine eliminating the need for any sample cleanup procedure. In special cases where transformers have failed due to water contamination or have been removed for service and stored in areas near seawater or road salt, inorganic chloride may cause an elevated reading.

Before a soil sample can be analyzed, the organic contaminates must be extracted using an organic solvent. Because soil samples invariably contain inorganic chlorine, the soil extract is cleaned up to remove all traces of the inorganic chloride. The cleaned extract is then reacted and the resulting chloride is quantified. For soil analyses, therefore, only the organic chlorine content is ever quantified. Extraneous sources of chloride contamination such as road salt or sea salt are **not** detected.

As with soil samples, a water sample must also be extracted prior to final analysis. The ratio of the solvent volume to the sample volume determines the sensitivity of the test. The extract is reacted and the chloride is quantified as above. As with soil samples, only the organic chlorine is quantified in water samples.

Wipe tests require that a specific area be wiped using a hexane-soaked gauze. The gauze is extracted with an organic solvent, reacted, and the chlorine content determined. For wipe samples, the standard procedure eliminates most all inorganic chlorine contamination. Areas with very high surface concentration of salts may need to be prepared differently.

#### Chloride Conversion Reaction

Once the sample has been prepared, the remaining chloride conversion steps are the same for all sample types. The conversion step is a reaction of the sample with an excess of metallic sodium in the presence of a catalyst to convert the covalently bound organic chlorine into free chloride ions. This reaction of metallic sodium with organo-chlorine compounds is vigorous and goes to completion converting all of the organic chlorine to chloride.

#### Quantification

Upon the completion of the conversion reaction, the resulting chloride ions are extracted into an aqueous buffer. The chloride content in the final extract/buffer is then quantified using a chloride specific electrode and converted to an equivalent analyte concentration using the conversion factors programed into the

analysis method of the instrument. The conversion factor is made up of the percent chlorine, the sample size multiplier, and the extraction efficiency multiplier. The analyte concentration is determined by first subtracting the blank from the raw chloride reading (except when the Blank Subtraction has been turned off), and the resulting corrected chloride value is multiplied by the size and extraction multipliers and divided by the chloride fraction (percent chlorine divided by 100):

The L2000DX analyzer comes preprogramed with 28 methods providing for analysis of a large number of chloride compounds in most matrices. Correction factors are preprogramed to account for all of the steps necessary to run samples using the standard prepackaged reagents. If the procedures are modified or other analytes are expected, up to 22 custom methods can easily be built.

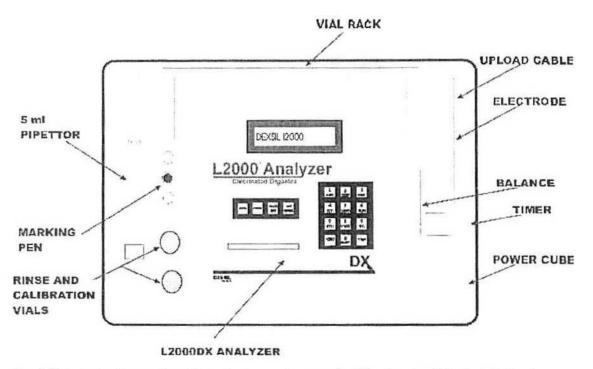
The operational program of the L2000DX has been designed to provide the most versatile data reduction platform possible for the analysis of chlorinated organic compounds in a variety of matrices. At the same time, the program is easy to use for routine analysis and does not require custom method development. The operating program is divided into an Analysis Loop and the OPTIONS Menu. Preprogramed methods are available for use in routine analyses and are easily selected from within the Analysis Loop. The software automatically cycles back to critical points in the analysis loop to prompt the user for "Calibration", "Blank Subtraction" and "Sample ID" inputs. Measurements can be initiated without requiring any additional programing by simply choosing the Method and following the on-screen instructions,. Custom methods can be constructed by selecting the OPTIONS Menu and modifying existing methods or creating a new method (see Creating and Editing a Method).

# Unpacking

The L2000DX is shipped in its own carrying case, complete with all the hardware necessary for operation. Upon receiving the L2000DX Analyzer, please verify that all of the items listed below are present and in good working order.

The carrying case for the L2000DX Analyzer should contain the following items:

L2000DX Electronic PCB/Chloride Analyzer
Power cube AC-DC transformer
PC Upload Cable
Portable electronic balance & 100 gm Calibration weight
5 mL pipettor
Vial rack
Timer
Marking pen
Two empty 20 mL glass vials for RINSE and CALIBRATION solutions
L2000DX Data Manager Software CD
Instruction Manual, Certificate of Calibration and MSDS



In addition to the aforementioned items in the carrying case, the following should be included in the same outer shipping box:

Chloride-ion specific electrode<sup>1</sup> Packet of polishing strips<sup>1</sup> Test tube rack

To prevent damage to the instrument in the case of a leak, the sample preparation reagents are shipped separately. The exact makeup of the reagent pack will depend on the specific reagent option chosen at the time of ordering. The options available for the L2000DX and the components contained in each are the following:

# Option 1: Reagents for 40 Oil Tests

- 1 250 mL bottle of EXTRACT solution
- 1 250 mL bottle of RINSE solution
- 1 250 mL bottle of CALIBRATION solution
- 1 60 mL bottle of Electrode Filling Solution
- 1 tray of 40 empty 20 mL glass vials
- I box of tissue wipes
- 1 shelf-pack containing (in a heat sealed foil bag):

<sup>&</sup>lt;sup>1</sup> These items are shipped in their original packaging from Orion. Once they have been unpacked, they should be carried in the above-labeled slot in the carrying case.

- 40 filters
- 40 pipettes
- 40 reaction tubes (black dispenser caps)

Reorder Part No: (LP-ORK)

#### Option 2: Reagents for 20 Soil Tests (Standard Procedure)

- 1 250 mL bottle of EXTRACT solution
- 1 250 mL bottle of RINSE solution
- 1 250 mL bottle of CALIBRATION solution
- 1 60 mL bottle of Electrode Filling Solution
- 1 box of tissue wipes
- 1 40-cell box containing:
  - 20 empty 20 mL glass vials
  - 20 bottles containing Soil Extraction Solvent
- 1 shelf-pack containing (in a heat sealed foil bag):
  - 20 filters
  - 20 pipettes
  - 20 reaction tubes (black dispenser caps)
  - 20 metal scoops for obtaining soil samples
  - 20 10 mL plastic syringes
  - 20 drying columns (foil packed)
  - 20 empty test tubes with white caps

Reorder Part No: (LP-SRK)

#### Option 2a: Reagents for 20 Soil Tests (Two-Step Extraction Procedure)

- 1 250 mL bottle of EXTRACT solution
- 1 250 mL bottle of RINSE solution
- 1 250 mL bottle of CALIBRATION solution
- 1 60 mL bottle of Electrode Filling Solution
- 1 box of tissue wipes
- 1 set of instructions
- 1 40-cell box containing:
  - 20 empty 20 mL glass vials
  - 20 6 mL black-capped water vials
- 1 shelf-pack containing (in a heat sealed foil bag):
  - 20 empty 25 mL soil tubes
  - 20 filter funnels
  - 20 pipettes
  - 20 reaction tubes with black dispenser caps
  - 20 break-top vials containing Soil Extraction Solvent
  - 20 metal scoops for obtaining soil samples
  - 20 syringe filters (in a heat sealed foil bag)
- 1 set of instructions

Reorder Part No: (LP-SR2)

#### Option 3: Reagents for 20 Water Tests

- 1 250 mL bottle of EXTRACT solution
- 1 250 mL bottle of RINSE solution
- 1 250 mL bottle of CALIBRATION solution
- 1 60 mL bottle of Electrode Filling Solution
- 1 box of laboratory wipes
- 1 40-cell box containing:
  - 20 empty 20 mL glass vials
  - 20 bottles of Isooctane
- 1 shelf-pack containing (in a heat sealed foil bag):
  - 20 filters
  - 20 pipettes
  - 20 reaction tubes (black dispenser caps)
  - 20 empty test tubes with white caps
- 1 set of instructions

Reorder Part No: (LP-WTR)

#### Option 4: Reagents for 20 Wipe Tests

- 1 250 mL bottle of EXTRACT solution
- 1 250 mL bottle of RINSE solution
- 1 250 mL bottle of CALIBRATION solution
- 1 60 mL bottle of Electrode Filling Solution
- 1 box of tissue wipes
- 2 pair of safety goggles (1 pair/10 tests)
- 2 pair of neoprene gloves (1 pair/10 tests)
- 1 shelf-pack containing (in a heat sealed foil bag):
  - 20 filters
  - 20 pipettes
  - 20 reaction tubes (black dispenser caps)
  - 20 hexane ampules
  - 20 empty test tubes with white dispensing caps
- 1 box containing:
  - 20 gauze pads in 20 mL glass vials
  - 20 10 mL glass bottles containing Extraction Solvent (isooctane)
- 1 box containing:
  - 20 empty 20 mL glass vials
  - 20 forceps
- 1 set of instructions

Reorder Part No: (LP-WIP)

NOTE: DO NOT STORE REAGENTS IN THE INSTRUMENT CARRYING CASE, AS ANY LEAKS WILL DAMAGE THE INSTRUMENT.

## Initial Set Up

Once the L2000DX has been unpacked, the components checked and the contents of the reagent pack verified, the L2000DX can be set up for analysis. Locate the vial rack, the two empty 20 mL vials and the bottles of RINSE and CALIBRATION solutions. Remove the caps from both vials and label one 20 mL vial "RINSE" and the other "CAL". Fill each vial approximately ½ full with the appropriate solution and set in vial rack. (NOTE: It is helpful to label the rack with the location of the RINSE and CAL vials.) These solutions will be used for the initial setup and calibration of the electrode. They will also be used periodically to re-calibrate the electrode and check the electrode output. Once set up, the electrode should remain in the RINSE solution when not in use.

Prior to running the Analyzer on battery power, it should be charged overnight using the power cube supplied with the instrument. The Analyzer can be operated from line power while the battery is charging and should be left plugged in whenever AC power is available. Turn on the Analyzer by pressing and holding the <ENTER/ON> key until the printer advances one line and the display reads:

### Dexsil L2000DX Version X.XX

This screen is the First Screen in the operating program. The Analyzer is ready to accept instructions.

## Restoring the Electrode After Extended Storage

The electrode is shipped empty and should be stored empty whenever it will be left for an extended period of time (see Electrode Care and Maintenance). To restore the electrode to operating condition:

- 1. Remove protective cap from the tip of the electrode.
- Fill the electrode, up to the filling hole in the side, with the Orion Electrode Filling Solution supplied with each lot of reagents. To fill, place the nozzle of the fill solution bottle into the hole on the side of the plastic body and gently squeeze the fill bottle.
- Drain the electrode, while holding it upright over the waste beaker, by grasping the body of the electrode firmly in one hand and pushing down on the black cap where the cord enters the electrode. The filling solution will drain out of the bottom of the electrode.
- Refill the electrode and make sure that the fill solution is making contact between the black cone and the plastic shell at the bottom of the electrode. If it is not making contact at all points, drain the electrode again and refill.
- Connect the electrode to the BNC connector labeled "ELECTRODE" on the back of the L2000DX Analyzer and check electrode output.

6. To check the electrode, turn the Analyzer on by pressing and holding the <ENTER/ON> key until the printer advances one line and the display screen activates. Select the OPTIONS Menu from the First Screen by the pressing <OPTION> key. At the OPTIONS Menu, go to "DIAGNOSTICS" by pressing the <6> key. This display:

### DIAGNOSTICS X.X XXX.X mV XX.X°C

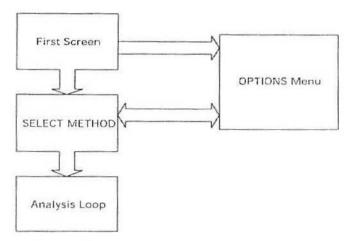
will indicate the current temperature and then continuously update the electrode output in millivolts (mV). Place the electrode in fresh RINSE solution, gently swirl the solution with the electrode and allow to sit. The electrode output should reach 140 mV or greater within 1 minute. If the electrode output does not reach at least 140 mV, empty the RINSE solution and refill with fresh RINSE solution. If this does not improve the electrode output, drain the electrode, refill it with filling solution and check the output again. Once the output is greater than 140 mV, the electrode is functioning correctly and it is safe to proceed with measurements. If the electrode output does not reach 140 mV, see under Trouble Shooting for remedies. NOTE: The update rate for the "DIAGNOSTICS" display is 6 seconds, any keys pressed will not register until the end of the current measurement cycle.

## Basic Operation of the L2000DX

#### General Information

The L2000DX meter is equipped with an internal gel cell battery and can be operated with or without the wall adaptor. A fully charged battery should be sufficient to operate for 3 full 8-hour days of sample analyses, printing each data point. To conserve battery power, the printer can be turned off and the stored data printed or uploaded at a later time. To preserve the battery, the unit should be plugged into an AC outlet whenever possible.

The operation of the L2000DX is controlled by a program organized into a series of "screens". A screen prompts the user for appropriate input or displays output from the processor. There are two screens at the beginning of the program that will be referred to throughout the text. They are, the First Screen which appears when the analyzer is turned on and is returned to when turning the meter off manually, and the SELECT METHOD Screen which is the next screen in sequence. From the SELECT METHOD Screen the desired analytical method is chosen prior to analysis. From this screen the program enters a series of screens that step the user through the analysis of prepared samples. This series includes the calibration steps and blank determination and will loop back for periodic re-calibration as necessary. This section of the program is referred to the Analysis Loop. (See below for a block diagram of the program..)



Once in the Analysis Loop, the analyzer must be calibrated. The calibration procedure is a single point calibration using a 50 ppm chloride CALIBRATION standard supplied with each batch of reagents. This calibration must be repeated approximately every 20 measurements or one hour, whichever comes first. A timer, a counter, and a thermistor have been built into the instrument to prompt the user for recalibration when necessary. During the calibration procedure, the function of the electrode will also be evaluated. If the electrode potential for the calibration solution is not within the acceptable limits, a warning will be displayed and the program will jump to the diagnostics mode. (See below under DIAGNOSTICS.)

All other functions of the program are accessed by pressing the <OPTION> key from the First Screen or the SELECT METHOD Screen. This section of the program is referred to in the manual as the OPTIONS Menu. Although only one choice can be displayed at a time, options are organized into a sequence of choices, functioning much the same as a menu typical of most computer programs.

# Turning the Analyzer On and Navigating the Operating Program

Pressing and holding the <ENTER/ON> key until the printer advances one line and the display activates will turn the Analyzer on and the program will be in the First Screen. In the First Screen the display will read:

#### Dexsil L2000DX Version X.XX

indicating the current software version running on the L2000DX. The version number should match the version number indicated on the cover of this manual.

From the First Screen pressing the <ENTER/ON> key will move the program to the SELECT METHOD Screen. In the SELECT METHOD Screen:

#### SELECT METHOD method id

pressing the <<NO> and <YES>> keys will scroll through the stored methods. When the desired method is displayed, pressing the <ENTER/ON> key will select it. The program will then enter the **Analysis Loop** and the program will begin prompting one through the operations necessary to begin the analysis of samples using the chosen method.

#### Calibration

The first step required before any measurements can be made is to calibrate the instrument. The L2000DX operating program will jump to the **CALIBRATION** screen when a new method is selected, when the temperature has changed by more than 5°C, or when the recalibration timer is triggered. The display will read:

## CALIBRATION FOR method name

indicating the method that is currently selected. Press the <ENTER/ON> or <YES>> keys and the display will indicate that the electrode should be placed in clean fresh CALIBRATION solution:

#### IS CALIBRATION

#### SOLUTION READY

Remove the electrode from the RINSE solution, gently wipe the body of the electrode with a clean wipe and insert the tip into the CALIBRATION solution. NOTE: DO NOT WIPE THE TIP OF THE ELECTRODE AS THIS MAY DAMAGE IT. Swirl the electrode gently a few times and press the <ENTER/ON> or <YES>> key. Allow the electrode to remain in the calibration solution, the meter will briefly display the message:

## MEASUREMENT IN PROGRESS

Provided the electrode output is within the acceptable range and the ambient temperature is also within the acceptable range, the calibration procedure is complete when the program display briefly:

$$CAL\ TEMP = XX \circ C$$
  
 $mv = xx$ 

The calibration results will also be sent to the printer, if the printer has been turned on.

CALIBRATION: hh:mm mm/dd/yyyy

VERSION: XXXX

METHOD: METHOD NAME

MV = XX.X TEMP. = XX.X  $^{O}C$ 

A = xxx.x B = xx.xxx

OFFSET = X.X

The program function will then move to the next step in the chosen method. If the temperature is outside the acceptable range the following error message will be displayed:

Temperature Error xx.x °C

A temperature error indicates that the ambient conditions are not suitable for measurement. Save all extracts and move to a location where the temperature is within the acceptable range.

If the electrode output is outside the acceptable range, an error will be displayed:

 $CAL\ ERROR$ mV = xx

Pressing the <ENTER/ON> key will move the program back to the beginning of the Analysis Loop. (See "CAL ERROR" in Error Messages under Trouble Shooting)

#### Blank Determination

All of the pre-programed methods have the option of subtracting a reagent blank built into the method. If blank subtraction has been enabled in the chosen method, this option will be presented after each calibration. The option will be presented as:

USE BLANK YES/NO

If NO is chosen, the program moves on to the next step in the method as described below in Analysis. If YES is chosen, the option will be presented:

## USE PREVIOUS BLANK YES/NO

If YES is chosen, an opportunity will be presented to change the stored blank or to enter a fixed value at:

USING BLANK OF 0.00

This number, in ppm chloride, can be edited or accepted, as is, by pressing the <ENTER/ON> key. The program then continues to the next step as described below under **Analysis**.

If NO is chosen, the screen will prompt for the blank solution:

PUT PROBE INTO BLANK <ENTER>

The blank solution must be prepared as a sample would be, using all of the sample preparation steps and reagents but without an actual sample.<sup>2</sup> After reaction the blank must be allowed to reach room temperature as described below. Insert the electrode into the solution, swirl gently for a few seconds and allow to sit. With the electrode in the solution, press the <ENTER/ON> or <YES>> key. After the measurement has been made, the blank result will be displayed as:

BLANK READING 01.2

After pressing the <ENTER/ON> key, the program will continue to the next step in the analysis as

When preparing a blank using the Standard Soil Extraction Solvent, DO NOT add any of the water from the bottom of the solvent vial.

described below. A measured blank cannot be edited. Only stored blank values can be edited.

#### Analysis

Prepare samples for analysis as described under **Sample Preparation**. Once the samples have been prepared, choose the appropriate analysis method and calibrate the meter. The program will display instructions as determined by the chosen method.

 Make sure that the method has been selected, the instrument has been recently calibrated (including any blank determinations) and that the analysis solutions have been allowed to temperature equilibrate for at least 5 minutes. The display should read:

## ANALYZE SAMPLE method name

Press the <ENTER/ON> key to continue to the screen:

# SAMPLE ID (save) sample id

If the sample ID is correct, proceed to the next step. Otherwise change the ID as described under **Entering Data**. The indication "save" will appear in this screen if the option to save data points as they are taken has been selected (See **Data Management**).

- Remove the electrode from the rinse solution and wipe the body carefully with a tissue. NOTE: DO NOT WIPE THE TIP OF THE ELECTRODE AS THIS MAY DAMAGE IT. Place the electrode in the vial to be analyzed and swirl it gently for several seconds.
- Press the <ENTER/ON> key. The L2000DX will take a series of readings. Once the readings
  have converged on a constant value, the result will be displayed along with crucial method
  information. A beeper will sound to indicate that the new value is ready.
- 4. To analyze additional samples, press the <ENTER/ON> key. The program will check the ambient temperature and, if it is still within the allowable range, the program will cycle back to begin the next analysis. Proceed as in step 1 above to make the next measurement.
- Samples may be saved for analysis at a later time, but the vials should be tightly capped. Once they have been read, samples should be discarded. Do not re-analyze samples.
- Pipettes and oil should be disposed of as PCB/Organo-chlorine waste. Analysis solution can be disposed of as ordinary aqueous waste containing nickel.

#### Entering Data

All user input to the L2000DX Analyzer is through the 16 key keypad on the front panel. There are 12 alpha-numeric keys and 4 function keys. Audible feedback is provided, on all keys, to indicate that a key press has been registered by the processor. Data is entered using the alpha-numeric keys. These keys are active only when an input is required and will be acted on only when they are appropriate for the active screen.

When numeric input is required, only the numbers indicated on the keys will be registered. To change an entered number, use the arrow keys to move the cursor to the desired location and press the correct number key. To input letters in a text string, such as in a method name or sample ID, both an alphanumeric key and the ALPHA key must be pressed. When an alphanumeric key is pressed, the number associated with that key will be displayed first. The ALPHA key is then pressed once, twice, or three times to change the character to the desired letter. Continued ALPHA key presses will "scroll" the characters through the letters and the number shown on the face of the key. For example: Pressing the <7> key will first cause the "7" to be displayed. The cursor will move to the next space and, if the ALPHA key is pressed next, the "7" changes first to an "S", then a "T", followed by a "U". (Pressing the< ALPHA> key again will cycle the character back to the "7".) Once the desired character is displayed, pressing an alpha-numeric key will enter the next character, above the cursor.

Having a sample ID that includes a number automatically incrementing with each successive sample, will make assigning a unique sample ID much easier. This is accomplished by using "wildcards" in the sample ID. There are two "wildcard" characters that can be used. These are the "\*" and the "?". They function much the same as their DOS equivalents. Entering an "\*" in a sample ID will add an automatically sequencing number to the sample ID. The number begins at 00001 and increments up to 99999. (If less than 5 spaces are left in the sample ID then the number is limited to the number of digits left.) The "?" has the same function as the "\*" but the appended number will only have the number of digits as question marks entered. NOTE: Editing a sample ID with a "wildcard" will freeze the number at the current value and eliminate the wildcard function.

#### Special Keys

The <NO and YES> keys function as either a yes/no response or as arrow keys to move the cursor through a text entry.

The four special function keys, ALPHA, OPTION, BACK/OFF and ENTER/ON are used to direct the operation of the program. The ALPHA key is used to input letters in a text string. The OPTION key, from the first or second screen, will transfer program operation to the **OPTIONS Menu**. From the **RESULT Screen** in the **Analysis Loop**, the OPTION key is used to view the chosen parameters of the currently active "Method". The BACK/OFF key is used to exit from any section of the program, back through successive screens to the **First Screen** and, ultimately, to turn the meter off. The ENTER/ON key will turn the instrument on and is used to enter any options chosen or to step forward in the program.

#### Electrode Check

The electrode is the most important component in the system. It is, therefore, important that the electrode be properly maintained and the initial setup will determine how well the electrode is functioning. Before turning the L2000DX analyzer on, insure that the electrode is properly connected to the back of the unit. Check the fill level in the electrode and, if necessary, refill the electrode with the Orion filling solution supplied with each lot of reagents. To fill the electrode, insert the tip of the filling spout of the filling solution bottle into the hole on the side of the electrode. Slowly squeeze the solution into the electrode body until it reaches the level of the hole.

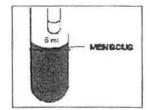
Once the electrode has been filled, check the electrode output by going to "Diagnostics" from the OPTIONS Menu. Rinse and refill the RINSE vial with fresh rinse solution and swirl the electrode in the solution gently for a few seconds. Allowing the electrode to sit in the rinse solution, verify that the mV reading is greater than 140 mV. If the output does not reach at least 140 mV within a minute, refill the RINSE vial with fresh solution and recheck the output. If this does not improve the output, refill the electrode with fresh fill solution. (See Electrode Care and Maintenance).

## Sample Preparation

### Oil Samples

Before a transformer oil sample can be analyzed with the L2000DX, the PCB/Chlorinated Organics must be chemically converted to chloride.

 Remove the cap from a black-capped tube and add oil up to the 5 mL line using a polyethylene pipettor (See Figure 2). Replace the cap tightly on the tube.



Break the bottom (colorless) ampule in the tube. Shake the tube well for 10 seconds.

Figure 2

- Break the top (gray) ampule in the tube. Shake the tube vigorously for 10 seconds Allow the reaction to proceed for additional 50 seconds (total of one minute), while shaking intermittently several times.
- 4. Using the 5 mL pipette, add five milliliters of extract solution to the back-capped tube. Tighten the cap securely and shake vigorously until the foam and dark color disappear. Vent the tube by partially unscrewing the black cap while holding the tube upright. Squeeze the test tube slightly while re-tightening the cap, and shake the tube vigorously for 20 seconds more. Vent again, tighten cap and stand the tube upsidedown on the flat top of the cap and allow to settle for two minutes.
- 5. Place a polyethylene filter funnel in one of the 20 mL glass vials marked with the sample number. Position the black-capped test tube directly over the top of the funnel and open the dispenser nozzle (See Figure 3). Dispense the solution by carefully squeezing the sides of the tube. Stop as soon as the first drop of oil appears. Allow the solution to pass through the funnel, but remove the funnel before any oil can get through. Allow the solution to cool for five minutes. The sample is now ready for analysis.

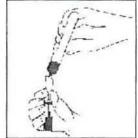


Figure 3

## Soil Samples

To analyze a soil sample for PCB/Chlorinated Organics, the analyte must first be extracted from the sample. There are two solvent extraction systems available. Depending on the specific application, either the standard extraction solvent or the two-step procedure will be most appropriate. Both systems provide good, reproducible recoveries on dry sandy loam type soils. The standard procedure is somewhat faster and has fewer steps, but should not be used on wet or heavy clay soils. Regardless of the solvent system used, it is important that split samples be periodically analyzed by a reputable laboratory, not only to identify/confirm the Aroclor present, but also to confirm the extraction efficiency of the L2000DX solvent system. Contact Dexsil before trying to analyze other types of materials. NOTE: The quality of the final result is directly determined by sampling technique. It is, therefore, important to use proper protocols for sample collection and homogenization.

#### Standard Procedure for Soil Analysis

1. Using the metal spatula and the portable electronic balance supplied with the kit, weigh out ten grams of the soil into the empty, whitecapped test tube. NOTE: Be careful not to get any foreign material into the weighed sample, i.e., absorbent material, large rocks, etc. The empty tube can be tared by placing it on the balance and pressing the <ON/OFF/ZERO> key.

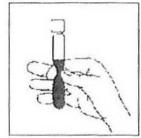


Figure 4

- 2. Remove the black cap from the glass vial containing the extraction solvent and pour the entire contents of the vial into the tube containing the soil. Replace the white cap on the plastic test tube tightly and shake the tube vigorously for one minute. Break up any lumps of soil by squeezing the sides of the test tube during the shaking process (See Figure 4). Allow the tube to settle upright for two minutes.
- 3. Remove the drying column from its foil pouch by poking the pointed end of the column through the foil and remove the red end-cap. Pull the plunger completely out of the 10cc syringe. Attach the end of the blue drying column to the tip of the syringe by sliding it over the collar on the tip of the syringe. This is a tight fit and the drying column may have to be carefully worked onto the syringe. Make sure that it is scated tightly.
- 4. Remove the black dispensing cap from the plastic test tube that contains two glass ampules. Slide the syringe-drying column assembly part of the way into the test tube which contains the two ampules. Stand the whole assembly upright. Using the polyethylene pipette, remove the extraction solvent from on top of the soil and dispense it into the top of the open syringe barrel. You will need to recover enough extraction solvent to fill the syringe barrel to the 7 mL level. Try not to remove any soil with the solvent as this may clog up the drying column. After 7 mL of solvent has been dispensed into the syringe, replace the plunger into the back of the syringe and apply pressure so that the solvent is forced through the drying column at the rate of 2 or 3 drops per second. (NOTE: Do not force the solvent through the drying column too fast.) When the dried solvent fills the test tube to the 5 mL line, pull back on the plunger to stop the flow of solvent. Remove the syringe-drying column assembly from the test tube, and screw the black dispensing cap tightly onto the test tube.
- 5. Break the bottom (colorless) ampule in the test tube by squeezing the sides of the tube and shake the mixture well for 10 seconds. Break the top (gray) ampule in the test tube and shake the tube vigorously for 10 seconds. Allow the reaction to proceed for additional 50 seconds (total of one minute), while shaking intermittently several times.
- 6. Using the 5 mL pipettor, add five milliliters of extract solution to the back-capped tube. Tighten the cap securely and shake vigorously until the foam and dark color disappear. Vent the tube by partially unscrewing the black cap while holding the tube upright. Squeeze the test tube slightly while re-tightening the cap, and shake the tube vigorously for 20 seconds more. Vent again, tighten cap and stand the tube upside-down on the flat top of the cap and allow to settle for two minutes.

7. Place a polyethylene filter funnel in one of the 20 mL glass vials marked with the sample number. Position the black-capped test tube directly over the top of the funnel and open the dispenser nozzle. (See Figure 3) Dispense the solution by carefully squeezing the sides of the tube. Stop as soon as the first drop of the organic solvent appears. Allow the solution to pass through the funnel, but remove the funnel before any oil can get through. Allow the solution to cool for five minutes. The sample is now ready for analysis.

#### Two-Step Procedure for Soil Analysis:

- Using the metal spatula and the portable electronic balance supplied with the kit, weigh out ten
  grams of the soil into the empty, white-capped test tube. NOTE: Be careful not to get any
  foreign material into the weighed sample, i.e. absorbent material, large rocks, etc. The empty
  tube can be tared by placing it on the balance and pressing the <ON/OFF/ZERO> key.
- Add the contents of one break-top glass solvent vial to the test tube of soil sample. Replace the cap tightly on the tube and shake contents for 3 minutes making sure the entire soil sample is thoroughly wetted.
- Add the colored water component contained in the 6 ml black-capped vial to the test tube.
   Recap tightly and shake for an additional 2 minutes.
- Allow the mixture to separate for 2 minutes.
- Remove the plunger from a syringe/filter unit in the foil package and remove the black-dispensing cap from the reaction test tube and stand it in the rack.
- Remove the top layer from the soil test tube (solvent layer) using the polypropylene pipette
  provided and while holding the syringe/filter over the reaction tube, add 7 ml to the syringe/filter.
- Add solvent from the syringe/filter up to the 5 ml line of the black-capped test tube. Replace the cap tightly on the tube.
- Break the bottom (colorless) ampule in the black-capped test tube by squeezing the sides of the tube and shake the mixture for 10 seconds.
- Break the top (gray) ampule in the test tube and shake the tube vigorously for 10 seconds.
   Allow the reaction to proceed for an additional 40 seconds (total of one minute), while shaking intermittently several times.
- 10. Using the 5 milliliter pipettor from the basic L2000 system, add 5 ml of the L2000 Extraction solution to the black-capped tube. Tighten the cap securely and shake the tube vigorously until the foam and dark color disappears. Vent the tube by partially unscrewing the cap while holding the tube upright. Squeeze the test tube slightly while retightening the cap and shake a second time. Vent again, retighten cap and stand the tube upside-down on the flat top of the cap and allow to settle for two minutes.

11. Place a filter funnel in one of the 20 ml glass vials marked with a sample number. Position the black-capped test tube directly over the top of the funnel and open the dispenser nozzle. Dispense the solution by carefully squeezing the sides of the tube. Allow the solution to pass thorough the funnel, but remove the funnel before any oil can get through. Allow the filtered solution to cool for five minutes. The sample is now ready for analysis with the L2000 Analyzer.

### Water Samples

#### High Range (5-2000 ppm)

- 1. Fill sample tube with 10 grams of water sample.
- Add 10 mL of isooctane extraction solvent and shake vigorously for 30 seconds.
- Allow to separate into two phases for a minimum of 2 minutes. (If a emulsion forms, add sodium sulfate\*, shake and allow to separate again). Using the disposable plastic pipette remove 5 mL of the top solvent layer and add to the black capped reaction tube. (\*available from major chemical suppliers).
- Proceed with test as for an oil sample and quantify using the appropriate LX2000DX method.

#### Low Range (20 ppb - 5 ppm)

- Collect sample in 1 quart narrow mouth glass bottle with zero head space. Cap tightly and store
  on ice until analysis.
- When ready to analyze the sample, invert sample container gently once or twice and, using a plastic pipette, remove 35 mL of water from the sample jar by weighing 35 grams of water into a tared waste container and discard. Then add 10 mL of isooctane to sample container and shake vigorously for 2 minutes.
- Add sufficient chlorine free distilled water to bring the water level up into the neck of the sample bottle (the solvent level should be just shy of the top of the neck) and allow to set for 3 minutes.
- Withdraw 5 mL of the upper solvent layer (Do Not Remove Any Water With the Solvent), add to the black capped reaction tube and cap tube tightly.
- Proceed with the analysis as for an oil sample and quantify using the appropriate L2000DX method.

## Wipe Samples

Locate the scaled glass vials containing chromatographic grade hexane and carefully break off
the tip. Pour the entire contents into the vial containing the gauze pad. Grasp the soaked gauze
pad with the disposable forceps and using an approved technique, wipe an area of 1000 cm<sup>2</sup>.

- 1000 cm<sup>2</sup> is equivalent to a square measuring 31.6 cm or 12.5 inches on each side. It is equal to 1.08 ft<sup>2</sup>. Allow the hexane to evaporate from the wiping material (approximately 1 minute).
- 2. Being careful not to contaminate the wipe, place it as loosely as possible into the tube with the white dispenser cap. Pour the extraction fluid, (10 mL of isooctane), into the white-capped tube. Tighten the cap and solvate the gauze thoroughly for 30 seconds. Squeeze the tube to make sure that the isooctane completely washes the gauze. This solvent now contains all the PCBs that were removed during the wiping procedure.
- Remove the black dispenser cap from one of the reaction tubes. Open the spout on the white dispenser-capped test tube and dispense the isooctane extract into the black-capped tube up to the 5 mL line. Replace the cap tightly on the tube.
- Break the bottom (colorless) ampule in the tube. Shake the tube well for 10 seconds.
- Break the top (gray) ampule in the tube. Shake the tube vigorously for 10 seconds Allow the reaction to proceed for additional 50 seconds (total of one minute), while shaking intermittently several times.
- 6. Using the 5 mL pipette, add five milliliters of extract solution to the back-capped tube. Tighten the cap securely and shake vigorously until the foam and dark color disappear. Vent the tube by partially unscrewing the black cap while holding the tube upright. Squeeze the test tube slightly while re-tightening the cap, and shake the tube vigorously for 20 seconds more. Vent again, tighten cap and stand the tube upside-down on the flat top of the cap and allow to settle for two minutes.
- Place a polyethylene filter funnel in one of the 20 mL glass vials marked with the sample number. Position the black-capped test tube directly over the top of the funnel and open the dispenser nozzle (See Figure 3). Dispense the solution by carefully squeezing the sides of the tube. Stop as soon as the first drop of oil appears. Allow the solution to pass through the funnel, but remove the funnel before any oil can get through. Allow the solution to cool for five minutes. The sample is now ready for analysis.

## The OPTIONS Menu

Except for the Analysis Loop, all program functions of the L2000DX are accessed through the OPTIONS Menu. The options available are:

- 1) METHOD CREATE/EDIT
- 2) HEADER INFORMATION
- 3) DATA MANAGEMENT
- 4) PRINTER OPTIONS
- 5) TIME AND DATE
- 6) DIAGNOSTICS
- 7) PC UPLOAD
- 8) SET TEMP

The OPTIONS Menu is entered by pressing the <OPTION> key at the First Screen or the SELECT METHOD Screen. Once in the OPTIONS Menu, each option will be displayed for 3 seconds and they will continually loop for 3 minutes or until an option is chosen. An option is chosen by pressing the appropriate number for the desired option.

## I.) Creating and Editing a Method

The key to the utility of the L2000DX analyzer is the versatility of the methods that can be developed for the instrument. A "method" is the complete set of parameters that are necessary to convert a chloride reading into an accurate quantification of the targeted analyte. Preprogramed in the meter are a number of methods for the analysis of many common environmental contaminants. These methods can be modified and custom methods can be built by setting any of the conversion parameters used to convert the chloride reading into an equivalent analyte concentration.

Each method requires 8 parameters to be set. These parameters are determined by the composition of the sample and the chemistry of the sample preparation and/or extraction procedures used to introduce the sample into the system. They can be either calculated from known parameters or determined empirically from preliminary experiments. The parameters common to all methods and their allowable ranges are tabulated below.

Parameter	Range of Values			
Blank Subtraction	yes/no			
Chlorine Content	10 - 99.9			
Sample Size Correction	0.01 - 99.9			
Extraction Efficiency Correction	0.01 - 99.9			
Matrix	Oil, Soil, Water, Wipe			
Units to be Displayed	ppm, mg/kg/ ppb, ug/sdm			
Analyte Label	16 character alpha-numeric			
Method Name	16 character alpha-numeric			

To create a new method or edit an existing method choose 1) "METHOD CREATE/EDIT" from the OPTIONS Menu. Then choose either 1) "EDIT METHOD" to edit an existing method or 2) "CREATE NEW" to create an entirely new method. Choosing 2) "CREATE NEW" will begin the parameter selection for the new method directly. If 1) "EDIT METHOD" is chosen, the next screen will be:

## CHOOSE METHOD : x method names

to choose the method to edit. The existing method names can be viewed by pressing the << NO> key to scroll backward or <YES> > key to scroll forward. Once the desired method is displayed pressing the <ENTER/ON> key will select the method and the choice will be given to either:

# 1) MODIFY METHOD 2) DELETE METHOD

Choosing 2) "DELETE METHOD" will delete the chosen method. This is the only way to delete unwanted methods. (NOTE: Preprogramed methods cannot be deleted. Only user created methods can be deleted.) Choosing 1) AMODIFY METHOD® will begin the method parameter editing. After this screen, whether editing or creating a method, the steps are the same.

#### Blank Subtraction

The first parameter that will be displayed will be:

#### BLANK SUBTRACT YES OR NO

Enabling blank subtraction allows for the subtraction of a reagent blank, if any, from the raw chloride

measurement before the final result is displayed. When blank subtract is on, the analyst will be prompted to either measure a blank, use a previous blank or input a blank value to be used. During the analysis of unknowns, if a blank is subtracted, the results will be displayed with a "B" in the upper right corner of the display.

#### Chlorine Content

The next parameter that can be input is the chlorine content of the target analyte.

% CHLORINE XX.X 99.9%

Input as a percentage, this parameter is used to convert the total chloride reading into an equivalent analyte concentration prior to the display of the result.

#### Size Correction

The size correction is used to adjust the results for the sample size used for a particular analysis. The assumed sample size is 5 grams of a liquid sample, 10 grams for a soil sample and 1000 cm² for wipe samples. The correction would be calculated from the ratio of the expected sample size to the actual sample size. For example, if a 5 gram sample is used for soil analysis, the correction would be 10/5 or 2. NOTE: In the analysis of transformer oil, the sample is typically taken volumetrically, therefore, a correction for the density of the oil is incorporated into all pre-programed Oil Methods. The density of a typical dielectric fluid used in transformers, Diala-A, is 0.8833 g/cc. The size multiplier, built into each Oil Method, is then 1/0.8833 = 1.13. This allows the results to be displayed as ppm or mg/kg. The size correction screen is:

SIZE MULTIPLIER
1.13

#### Extraction Efficiency Correction

Because there are one or more extractions involved in the preparation of samples for measurement, a correction for extraction efficiency has been provided for in the method parameters in the screen:

EXTRACTION MULT
1.11

The correction is entered as a multiplier applied to the final result. For example the recovery of chloride ions from the organic phase in the final extraction of oil samples is 90%. For oil samples, this is the only extraction step, therefore, the correction multiplier would then be 1/0.90 or 1.11. The typical extraction efficiency for the recovery of organics from soil samples is 80%. Combined with a chloride recovery of 90% the overall extraction correction is (1/(0.80 x 0.90)) or 1.39.

#### Matrix

The matrix label for sample type appears in the header information and indicates what type of sample was analyzed. The available labels are:

1)OIL 2)SOIL 3)WATER 4)WIPE

To choose the matrix label enter the number of the matrix option and press the <ENTER/ON key. NOTE: This is a label only. Choosing a matrix does not set any of the numeric conversion factors. They must be set separately.

#### Units

The units variable in a particular method development is simply the text that appears associated with the displayed, printed or stored result. To choose a label, press the number for the desired units. The available labels are:

1)PPM 2)MG/KG 3)PPB 4)ug/sdm

Any of the units can be combined with any of the matrices chosen, however, ug/sdm is only meaningful for wipe samples. The units "ug/sdm" is shorthand notation for micrograms per square decimeter which is equivalent to micrograms per 100 square centimeters, i.e., ug/sdm = ug/100scm.

#### Analyte Label

The analyte label is a 16 character label that will appear on the display indicating the analyte equivalent concentration, assuming that all organic chlorine detected in the sample were that analyte. The entry screen appears as:

ANALYTE LABEL analyte label

This label can be left blank, however, something should be entered as this is the only way to identify the expected analyte when the final analytical result is displayed.

#### Method Name

After all of the method variables have been selected, the user will be prompted for the name under which the method will be stored in memory:

METHOD NAME method name There must be a unique name associated with each method. A method name consisting of all blanks is not allowed for this option. If an existing method name is entered, the prompt:

## EXISTING METHOD OVERWRITE IT?

will appear. Choosing YES will cause the new method to over write the existing one. (NOTE: Preprogramed methods cannot be over-written. If they are modified, they must be stored as a new method.) Choosing NO will loop the program back to the **METHOD NAME** screen for a new file name. Once a valid method name has been selected, program operation will return to the **OPTIONS Menu**.

### 2.) Header Information

Associated with each block of data are descriptors that will identify all of the important information needed to use the collected data at a later date. Along with the method information, date and time, etc., are header fields available for user selected information. Each of these fields is 16 characters long and the information is entered from the key pad as described under **Entering Data**. The available fields are:

Operator ID Customer ID Job ID Location ID Comments

If any of these parameters are changed a new header will be stored in memory, to be linked with the data, as well as printed on the printout, if the printer is enabled. The individual fields are edited through each of the individual screens. Text is entered as described under **Data Entry**.

When printed, the header information will appear as follows:

Time (hh:mm) Date (mm/dd/yyyy) Operator ID
Customer ID Job ID

Location Comments
Method Name Matrix

BLANK SUBTRACT: (yes/no, If yes: value)

CHLORIDE ANALYTE
SAMPLE ID READING CONCENTRATION

Pressing the <2> key, while in the OPTION Menu, will begin the editing of header information at the screen:

### HEADER SETUP <BACK> TO RETURN

Pressing the <ENTER/ON> key will continue to the next screen:

### OPERATOR ID XXXXXXXXXXXXXXXXX

After editing the text, pressing the <ENTER/ON> key will allow editing of the next header field:

### CUSTOMER ID XXXXXXXXXXXXXXXXX

After editing the text, pressing the <ENTER/ON> key will allow editing of the next header field:

### JOB ID XXXXXXXXXXXXXXXXX

After editing the text, pressing the <ENTER/ON> key will allow editing of the next header field:

### LOCATION ID XXXXXXXXXXXXXXXXX

After editing the text, pressing the <ENTER/ON key will allow editing of the next header field:

#### COMMENTS XXXXXXXXXXXXXXXXXX

After editing COMMENTS, pressing the <ENTER/ON> key will loop the program back to the first HEADER SETUP screen. Pressing the <BACK/OFF> key will exit to the OPTION Menu or pressing the <ENTER/ON> key will begin the editing process again.

#### 3.) DATA MANAGEMENT

A number of data management options are available to the user. They can be selected from the DATA MANAGEMENT Menu. Data management options are selected independent of the method chosen and remain in effect until changed by selecting a new option. Enter the DATA MANAGEMENT Menu by pressing the <3> key from the OPTION Menu. The first option is:

STORE EACH
POINT (Y/N)?

Activating this option by pressing the <YES>> key will cause each data point to be stored in memory as it is taken. Data points are stored along with all of the method and header information associated with them. The default for data storage is to store each data point. All data points will be stored automatically unless this option is changed. Pressing the <NO> key will deactivate this option and no further data will be stored unless this option is activated again.

Once the data storage option has been chosen the next screen is:

### CLEAR DATA MEMORY (Y/N)?

This option should be used periodically to clear out old or unwanted data. Choosing this option erases all stored data and header information and reformats the data storage space. The current header information and the current method are not altered. After choosing this option, confirmation will be required before the data will actually be erased:

## ALL DATA WILL BE LOST. PROCEED?

Pressing the <YES>> or <<NO> key will complete this option as desired and exit back to the OPTION Menu.

### 4.) PRINTER OPTIONS

The default option for the printer is to print all data points as they are collected. Anytime the header information is edited, a new header is printed. Anytime an external printer is connected to the printer port on the back of the unit, all printouts will be directed to the external printer.

The first option under 4) PRINTER OPTIONS is:

#### <u>PRINT POINTS</u> WHEN TAKEN (Y/N)?

Pressing the <YES>> key will cause each data point to be printed as it is taken. (This option refers only to the printing of data in the **Analysis Loop**. Printing stored data points is the next option.) This option can be turned off to save battery power in the field. It will also be turned off automatically if a low power condition exists. Turning off the print option by pressing the <<NO> key will result in no data printout when the data is taken in the **Analysis Loop**. To obtain a hard copy of the data, the data can be printed at a later time.

To print data after it has been stored, press the <YES>> key from the screen:

PRINT LAST XXXX
POINTS

Choosing this option will cause the last xxxx data points to be printed on either the internal or an external printer. The default is all of the stored data. This number can be edited using the numeric key pad.

To print the current header information, press the <YES>> key from the screen:

# PRINT HEADER NOW (Y/N)?

This option will print all of the header information on the current printer.

The last print option is to print out a hard copy of the method parameters. At the screen:

# PRINT METHOD NOW (Y/N)

Press the <YES>> key to print the method.

#### 5) DATE AND TIME

To change the date and/or the time, choose this option and enter the correct information in the indicated fields. The first option to change is:

#### TIME XX:XX hh:mm <ENTER>

Enter the time using the 24 hour clock; hours then minutes. The last entry will cause the current time to be briefly displayed and then the screen:

### DATE mm/dd/yyyy mm/dd/yyyy <ENTER>

Enter the date as a 2-digit month and day followed by 4-digit year.

### 6.) DIAGNOSTICS

This option should be used to periodically check the output of the electrode, such as at the beginning of each day or if the electrode has been stored for an extended period of time. Or, if an electrode error occurs, this option will allow the user to verify the fault and take corrective action. Once this option has been chosen, the L2000DX will begin measuring the mV output of the electrode and display the results along with the ambient temperature.

DIAGNOSTICS x.xx xx.x mV xx ° C

#### 7.) UP LOAD

Chose this option to upload stored data to a PC. The L2000DX Data Manager must be loaded an running on the target PC. (See L2000DX Data Manager.)

To upload data, first connect the L2000DX Analyzer to the PC using the upload cable provided. Once connected, select the 7) PC UPLOAD option by pressing the <7> key from the OPTION Menu. The display will change to:

# BEGIN UPLOAD <BACK> TO STOP

Then, from the PC, choose BEGIN UPLOAD to begin the upload.

### 8.) SET TEMP

This option allows for the field adjustment of the internal thermistor. When adjusting the L2000DX thermistor, the resulting temperature measurements are only as accurate as the thermometer used for adjustment.

To adjust the internal thermistor, choose 8) SET TEMP by pressing the <8> key from the OPTIONS Menu. The L2000DX will check the current temperature and display the raw result on the screen:

## INPUT TEMP IN °C XX.X °C (RAW)

enter the current temperature followed by pressing the <ENTER/ON> key. The adjusted temperature will be displayed with the message:

## NEW TEMP TO USE XX.X °C OK(Y/N)?

NOTE: An adjustment of ±5°C max. is allowed. If the input temperature differs by more than this, the temperature will be fixed at the max/min allowed.

## L2000DX Data Manager

#### Introduction

The L2000DX Data Manager is a PC based data base program specifically designed for data from the L2000DX Analyzer. It provides four basic capabilities: uploading stored data, report generation, data export functions and basic data base functions for tracking data from one or more L2000DX Analyzers.

#### Installation

To install the Data Manager: Insert program CD into CD drive and run setup.exe. The install program will provide guidance for all installation steps.

### Uploading data

Each time you upload data from a particular L2000DX unit, the software reads from the unit the date it was last cleared and stores this date for future reference. It also stores the number of the last record uploaded. The next time you upload data from the same unit, the software compares the date it reads from the unit with the stored date. If they are the same, it continues uploading data from the last uploaded record, eliminating any duplication in your data set. If the dates are different, the software assumes you have cleared the unit since your last upload and begins uploading data with the first record in the unit.

Note that the software keeps track of multipleL2000DXunits by reading from each unit its unique, factory-supplied serial number.

To upload data from an L2000DX analyzer, connect the analyzer to the PC using the supplied cable then select 7) PC UPLOAD on the L2000DX unit. Once the unit is connected and ready to upload choose Upload from the Communicate menu on the PC. Choosing it opens the L2000DX Upload box. Once this box is open click OK. The program will contact the L2000DX analyzer and begin uploading stored data.

If you want to cancel the process, click on the X in the upper right corner of the box, then click Abort Transfer in the resulting Communication Status message box.

## Selecting Data

Choosing Selection at the menu bar causes the Define Sample Selections dialog box to appear. Here you can choose to display only some of the available data records by using combinations of various filters.

Note: These filters will affect the display, printing and export of data.

Selection Filter - This heading (left side of the dialog box) contains four selections: Header, Customer, Job and Location. Check the checkbox for the filter(s) you want to use. You cannot combine Header with any of the other three filters, however the other three may be used in any combination. When you select one of the filters, a drop-down menu appears displaying the values available in the active data set.

**Header Range Filter** - This area lets you choose a range of consecutive Header numbers. The Starting and Ending must be different, and the Ending number must be greater than the Starting number.

Sample Range Filter - This area lets you choose a range of consecutive Ref#s. The Starting and Ending may be the same, but the Ending number must be greater than the Starting number.

As you make various filter selections, the data in the L2000DX window will change to reflect your choices, even while the Define Sample Selections dialog box is open.

The L2000DX Data Manager combines filters so that the data displayed, printed or exported satisfies all the filters. For example, if you select a **Customer** and a **Job** filter, you will see only data records with the required Customer number and the required Job number, not data with either the Customer number or the Job number.

As soon as you select any filter, a Clear All button appears in the dialog box to allow you to quickly clear all filter selections. A Clear All Filters button will also appear on the L2000DX Data Manager window so you can clear filters later without returning to the Define Sample Selections dialog box.

## Generating a Report

Choosing Print Report at the File menu causes the Report Page Format dialog box to appear. This box allows you to specify a title for your report.

In the edit field, type a title of up to 70 characters to be centered in the header of the report form.

Click the Print Preview button to see what the report will look like. You may choose to print the report from the preview screen.

Click the Cancel button to dismiss the Report Page Format box without previewing the report.

## Exporting Data

To export data to a Microsoft Excel spread sheet, choose **Export** from the **File** menu. This will open the **Save As** dialog box to allow you to choose the location for saving the currently active data set in Microsoft Excel spreadsheet format.

## Care and Maintenance

Your L2000DX is designed for ease of use and reliability and requires very little maintenance. By following the instructions outlined below, you should be able to obtain maximum life from the electrode and the instrument itself.

## Changing Paper

- Turn the L2000DX Analyzer off and remove the external power plug, if attached. Turn the analyzer over, lay flat on smooth surface and remove paper access door on bottom.
- Remove the empty paper roll by grasping the roll in the middle with one hand. With the other hand, gently push one side of the paper bracket out away from the roll, while lifting the roll in the middle. This will free one end of the spindle. Continue lifting the roll out of the bracket until it is free.
- 3. Remove the paper spindle from the spent core and insert into the new roll of paper.
- 4. With the L2000DX Analyzer still upside down and the paper access on the right side, slide the analyzer to the edge of the table until it hangs over the edge far enough for the paper slot on the keypad to be accessible. DO NOT ALLOW THE UNIT TO HANG TOO FAR OVER AS IT MAY FALL.
- 5. Install the new paper roll into the holder with the loose end of the paper coming off the top of the roll. (Treated side must be on the top of the paper as it exits the roll.) Grasping the roll in the middle, slide the roll between the uprights of the paper holder until the ends of the spindle snap into the holes in the paper bracket. While pushing in the paper roll, it may be necessary to slide the roll of paper to one side to deflect the paper holder enough to clear the other side. Once in place, the roll should spin freely and remain on the holder.
- 6. The paper should now be installed in the paper holder with the free end on top of the roll. With a clean square end, fold one corner of the paper back flush with the opposite side to form a 45• point on the end. If there is not a clean square end on the paper, pull off a length of paper and tear a square edge off, along the bottom of the case, before folding the corner.
- 7. Place the paper flat on the circuit board with the pointed end of the paper extending over the edge of the paper slot. Position the point approximately 1 inch from the side of the slot and, while keeping the paper flat on the board, slide the paper forward so that the point goes under the front edge of the green circuit board and into the printer. Continue pushing the paper forward, while gently moving the paper from side to side, until the paper exits the front of the analyzer.
- Gently pull the paper through from the front of the analyzer until a section of the full width of paper is exposed.
- If the paper does not exit the front of the analyzer, remove the paper and retry from step 7 above.

 Once the paper has been installed, replace the paper access door and turn the analyzer back over.

#### General Care

Do not allow the instrument to get wet. As with any electronic instrument, water is the quickest way to destroy the L2000DX's components. Store the instrument in its case when it is not in use and do not expose it to extremely humid environments.

Be careful not to spill any of the solutions on the instrument. They are all acidic and will quickly destroy the circuitry if they come into contact with it. If solutions are spilled onto the instrument, wipe it off quickly with a damp cloth. Do not store solutions in the same case with the instrument, as any leakage may cause serious damage. This is particularly important when the instrument is to be shipped by air.

When using the L2000DX where AC power is available, operate the instrument with the AC adapter. This will prolong the life of the battery and insure that the battery is always charged.

Always store the L2000DX with fully charged battery. (A completely dead battery could take approximately 6-8 hours to charge fully.)

If the L2000DX is to be stored for prolonged periods of time, it is important to periodically charge the battery. This will prolong the battery life and insure that the analyzer is always ready for use.

Protect the analyzer from static electric charges. The keypad and case are isolated from the internal circuitry and are not susceptible to static discharge. However, when connecting the electrode to the meter, under certain environmental conditions, the static discharge may reset the power management circuit. Before connecting the electrode, first touch the outer ring of the BNC connector with one hand while holding the metal connector on the electrode in the other. Then connect the electrode to the Analyzer.

The L2000DX analyzes for PCBs/Chlorinated Organics by finding the total amount of chlorine in a given sample. It is important, therefore, to keep all extraneous sources of chlorine away from the instrument and the various solutions. Take extra precaution when working near salt water or under very warm conditions when contamination by perspiration is possible. Never pour used CALIBRATION, RINSE, or EXTRACT solution back into a storage bottle as the entire bottle may become contaminated.

#### Electrode Care and Maintenance

The electrode is the most sensitive component of the L2000DX system. Care must be taken not to damage the sensing membrane on the tip of the electrode. If it does become damaged or contaminated, it may be possible to restore the electrode response by polishing. To polish the electrode: Remove one of the membrane polishing strips from the instrument case and place it flat on a solid surface, abrasive side up. Place one or two drops of RINSE solution or distilled water on the abrasive strip. With the electrode perpendicular to the abrasive strip, polish the electrode tip by gently moving it in a circular motion for about 30 seconds. Apply constant pressure, but do not push too hard on the electrode. When finished, soak the electrode for five minutes in rinse solution. Polishing strips can be reused several times. NOTE: DO NOT OVER POLISH. ELECTRODES SHOULD BE POLISHED ONLY WHEN NECESSARY.

When an electrode is <u>not</u> to be used for a period of more than one week or for an indefinite period, drain the filling solution from the electrode, flush the inside one or more times with distilled water, and store it dry with the protective black cap to protect the sensing membrane. Make sure to follow the procedures for restoring electrodes before using the electrode again (see Restoring the Electrode After Extended Storage).

Otherwise, the electrode filling solution should not be allowed to evaporate causing crystallization. For short periods of time between sample measurements including up to one week storage, maintain filling solution in the electrode and store the electrode in rinse solution. (NOTE: If a period of 12 hours [overnight] or longer elapses between measurements, drain a portion of the filling solution from the electrode, add additional filling solution to the filling hole, and start with fresh rinse solution.)

## Trouble Shooting

#### The instrument does not turn on.

- The battery is dead. Plug in the AC adapter and retry.
- The power management circuit has been overloaded and is locked due to a severe static electric discharge during the connection of the electrode. Contact Dexsil Corporation for further technical assistance.

#### The instrument turns on but the time and date have been lost.

- The power management circuit has been overloaded and has reset. This is most likely due to a
  static electric discharge during the connection of the electrode. Re-enter the time and date and
  proceed with the operation of the instrument. Follow the procedure outline under Electrode
  Care for connecting the electrode. Check electrode output in "DIAGNOSTICS" Mode.
- The battery has been disconnected and reconnected, resetting the power management circuit. Proceed as above.

#### The instrument turns off when plugging in the electrode.

 A large static electric discharge has overloaded the power management circuit. Turn Analyzer on in the normal manner. Power-up will be to the time and date screen. Follow the procedure outline under Electrode Care for connecting the electrode.

# The instrument does not provide a millivolt reading, in "DIAGNOSTICS", after the electrode has been plugged in.

Check the electrode to verify that it contains the filling solution. If it is empty or low, refill the electrode as described in: Restoring the Electrode After Extended Storage.

- Make sure that the bottom half inch (centimeter) of the electrode is completely immersed in the rinse solution.
- 2. Check the cable for loose connections.

#### The millivolt reading will not exceed 140 mV.

- Replace the RINSE solution, and swirl the electrode for several seconds before letting the reading stabilize.
- Replace the filling solution in the electrode as described in: Restoring the Electrode After Extended Storage.
- 3. Polish the end of the electrode. Remove one of the membrane polishing strips from the instrument case and place it flat on a solid surface, abrasive side up. Place one or two drops of RINSE solution or distilled water on the abrasive strip. With the electrode perpendicular to the abrasive strip, polish the electrode tip by moving it in a circular motion for about 30 seconds. Apply constant pressure, but do not push too hard on the electrode.
- 4. DO NOT OVER POLISH!! ELECTRODES SHOULD BE POLISHED ONLY WHEN NECESSARY.

#### The electrode will not calibrate.

- 1. During calibration the output from the electrode is checked. If it is outside the acceptable range, the electrode will not calibrate and the program will jump to "DIAGNOSTICS". In this mode check the output of the electrode. It should be between 50 mV and 75 mV. To obtain the proper millivolt output, the tip of the electrode must be immersed in calibration solution. If the electrode contains adequate filling solution, and is immersed in fresh calibration solution and allowed to equilibrate, the output should reach the correct level.
- 2. The electrode will not calibrate, even after it has equilibrated:
  - a. Change the calibration solution and refill the electrode as described in the Restoring the Electrode After Extended Storage.

- If this does not solve the problem, polish the electrode as outlined in Care and Maintenance.
- If these procedures do not work, the electrode may need to be replaced. Contact Dexsil for return information.

#### Insufficient quantity of solvent recovered from soil extraction.

Some soils are extremely dry or may contain a large percentage of organic material which can absorb enough extraction solvent so that there is less than the required amount of solvent available to complete the test. When soils of this type are being tested, five grams of sample instead of ten may be used. The final reading is then doubled or the Method is modified so that the Sample Size Correction is changed to twice its normal value. For instance, if, after weighing in five grams of soil, the final reading on the L2000DX is 35 ppm, the actual result for that sample is 70 ppm. Make sure to use the full quantity of extraction solvent and follow the instructions as you would for any sample. NOTE: This technique causes a loss of precision and should not be used unless absolutely necessary.

### Error Messages

CAL ERROR:

This message is generated during calibration if the electrode output is not between 50 mV and 75 mV. If this message occurs:

- Check solutions and change if not correct or not fresh.
- Check electrode output and refill with fresh fill solution if necessary.

CHECK DRIFT:

This message indicates that there is excessive drift in the electrode output either during a measurement or calibration. If this message occurs during the measurement of an unknown, the best estimate of the analytical result will be displayed below the warning. This number is for reference only, it may not be reliable. The sample must be re-analyzed to obtain an acceptable result. If this message occurs during a calibration, the electrode mV output will appear below the warning. If the warning appears, check the following:

- Check the electrode performance as described under Restoring the Electrode After Extended Storage. Follow the steps for electrode draining and refilling, then recheck the electrode output. If this message occurs during calibration, the electrode is most likely damaged. See above under The electrode will not calibrate.
- 2. Check electrode leakage The electrode is designed to leak a small amount of filling solution through the gap between the sensing pellet and the epoxy body. If the leak rate is too slow or too fast the performance of the electrode may be adversely affected. The electrode leak rate should be between 0.2 cm and 3 cm in 24 hours (as measured from the filling hole to the top of the fill solution).

3. Check for sample contamination. Some samples contain high levels of sulfur, heavy metals, waste oil, or other organics that may carry over to the final extract. If these compounds come into contact with the electrode, they can poison the sensing element. The output from the electrode will deteriorate with repeated exposure to these contaminants. If repeated samples cause a drift error, but the electrode checks out with the standard solutions, check for sample contamination.

CHECK ELECTRODE:

This message indicates that the electrode output has exceeded 180 mV. If this message appears, the electrode has been damaged or the wrong electrode has been attached to the L2000DX analyzer. Check for the correct electrode then follow steps for restoring an electrode.

HIGH:

This message indicates that an unknown reading is above 5000 ppm in analyte concentration. This message only appears during an unknown measurement. If this message occurs, re-analyze the sample using a smaller sample size.

LOW:

This message indicates that an unknown reading has resulted in a negative analyte concentration. This can be caused by either an electrode malfunction or an improper blank value used, i.e., a large blank value not representative of the true blank. If this message occurs, check the blank value used or check the electrode function as described above. If the electrode checks out, investigate possible co-contaminants in the sample that may have adversely affected the electrode.

LOW BATTERY:

If the battery voltage drops below the operational level of the instrument, the display will read "LOW BATTERY" followed by the message "Power Off" at which time the instrument will turn off automatically.

PRINTER ERROR:

Should the printer become jammed during the operation of the instrument, the operator will receive the following message:

### PRINTER ERROR DISABLE (Y/N)

Choosing "N" will cause the instrument to recheck the printer. Message will read:

## CHECKING PRINTER AGAIN

Choosing "Y" will disable the printer until the instrument is turned off and then on, at which time the printer will be checked again.

## Appendix A: Additional Information Available from Dexsil

DTR-10-01	"Alternative Methods of PCB Analysis", Stephen Finch, Dexsil Corporation; Generators Journal, Winter 1990.
DTR-10-02	"One Example Where Chromatography May Not Necessarily Be the Best Analytical Method", S.R. Finch, D.A. Lavigne-Dexsil Corporation, R.P.W. Scott, Ph.DGeorgetown University; Journal of Chromatographic Science-July 1990.
DTR-11-01	"A Comparison of Current PCB Analytical Techniques", Stephen Finch-Dexsil Corporation; PCB Forum, 3 <sup>rd</sup> International Conference for the Remediation of PCB Contamination, 1991.
DTR-11-02	"Case Study of a New Field Screening Tool for Delineating Soil PCB Contamination", Mark B. Williams, PE and John S. Flickinger-Dames & Moore (Madison, WI), Joseph E. Shefchek, CHMM-Wisconsin Power & Light (Madison, WI), E. Jonathan Jackson, CHMM-Haliburton NUS Environmental Corp. (Aiken, SC); Proceedings: 1991 EPRI PCB Seminar.
DTR-11-03	"PCB Determination, Simple/Low Cost or Complex/Expensive, Which Method is the Most Reliable in the Field?", S. Finch, pp. 45-1 to 45-4; Proceedings: 1991 EPRI PCB Seminar
DTR-12-01	"Application of a New PCB Field Analysis Technique for Site Assessment", Roger D. Griffin-Griffin Environmental; Proceedings of Hazmacon '92 March-1992.
DTR-12-02	"Available Options for the Analysis of PCBs". Stephen Finch: Environmental Science and Engineering p. 15., FebMarch.
DTR-13-01	"Electrochemical Method for Surface Testing of PCB Contaminated Electrical Equipment", Stephen Finch; 7th Annual Industry and PCB Forum, June 1993, Canadian Electricity Forum.
DTR-13-02	"A Comparison of Popular Field Screening Methods for PCB Contamination in Soil", Alvia Gaskill-Environmental Reference Materials, 1993 EPRI PCB Seminar.
DTR-14-02	"Comparison of the Response of PCB Test Methods to Different PCB Aroclors", Stephen Finch- Dexsil Corporation; Proceedings of "The Tenth Annual Waste Testing and Quality Assurance Symposium", July 11-15, 1994 Arlington, VA.
DTR-14-03	"Effect of Transformer Oil, Petroleum Hydrocarbons and Inorganic Salt as Interferences in Field Screening for PCB Contamination of Soil", Alvia Gaskill; Proceedings of "The Tenth Annual Waste Testing and Quality Assurance Symposium", July 11-15, 1994 Arlington, VA.
DTR-17-01	"Determination of Chlorinated Hydrocarbon Concentrations in Soil Using a Total Organic Halogen Method", T.B. Lynn, J.C. Kneece, B.J. Meyer, A.C. Lynn; Presented at the 13th Annual Waste Testing & Quality Assurance Symposium, July 6-9, 1997, Arlington, VA.
DTR-17-02	"Improved Extraction Efficiency of Polychlorinated Biphenyls From Contaminated Soil Using a Total Halogen Screening Method", W.S. Schutt-Young, Ph.D., A.C. Lynn, T.B. Lynn, Ph.D., B.J. Meyer, M.J. Krumenacher; Presented at "EnvirACS '97" held at the 13th Annual Waste Testing & Quality Assurance Symposium, July 7-9, 1997, Arlington, VA.
DTR-18-03	"Electrochemical Technique/Ion Specific Electrode Dexsil Corporation L2000 PCB/Chloride Analyzer", A.B. Dindal, S. Billetts, Environmental Technology Verification Report, US-EPA, Office of Research and Development, Washington, D.C., EPA/600/R-98/109, August1998

PCB Detection Technology Dexsil Corporation L2000DX Analyzer, A.B. Dindal, C.K. Bayne, E.N. DTR-20-01 Koglin, Draft Environmental Technology Verification Report, US-EPA Office of Research and Development, Washington, D.C. Report, December 2000 "Analysis of Water for PPB Range Chlorinated Organics Using a Total Organic Chlorine Analyzer," DTR-21-01 Theodore B. Lynn, Ph.D., Mary Kate Boggiano, Larry M. Sacramone, David L. Balog, Andrew C. Lynn, Dexsil Corporation, Presented at the Waste Testing and Quality Assurance Symposium 2001, August 13-16, 2001, Arlington, VA "Low Level Detection of PCE in Monitoring Well Samples Using a Total Organic Chlorine Based DTR-21-02 Field Method," Theodore B. Lynn, Ph.D., Dexsil Corporation, Keith A. Wright, Camino, California, Presented at the Waste Testing and Quality Assurance Symposium 2001, August 13-16, 2001, Arlington, VA DTP-09-01 "Accurate On-Site Analysis of PCBs in Soil, A Low Cost Approach", Deborah Lavigne-Dexsil Corporation. DTP-09-02 "Field Test Kit for Quantifying Organic Halogens in Water and Soil", Deborah Lavigne-Dexsil Corporation. DTP-11-01 "PCB Analysis by Gas Chromatography-What do the Numbers Mean? 1991", Stephen Finch-Dexsil Corporation. EPA Method 9078 "Screening Test Method for Polychlorinated Biphenyls in Soil", 3rd edition SW DMR-16-01 846- Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, June 1997; Federal Register Vol. 62, No. 114, 6/13/97, Rules & Regulations.

## Appendix B: L2000DX System Methods Table

Compound	Blank Subtract	%Chlorine	Size Multiplier	Extraction Multiplier	Matrix	Units	Analyte Label	Method Name
Aroclar 1242	yes	42	1.13	1.11	Oil	ppm	AROCI OR 1242	1242 OIL
Aroeler 1242	yes	42	1	1.33	Soil	ppm	AROCLOR 1242	1242 SOIL
Arocler 1242	yes	42	1	1.1	Soil	ppm	AROCLOR 1242	2 STEP 1242
Aroclor 1242	yes	42	1	1	Wipe	• g/100scm	AROCLOR 1242	1242 WIPE
Aroclor 1242	yes	42	1	1.25	Water	ppm	AROCLOR 1242	1242 WATER HIGH
Aroclor 1254	yes	54	1.13	1.11	Oil	ppm	AROCLOR 1254	1254 OIL
Aroclor 1254	yes	54	1	1.33	Soil	ppm	AROCLOR 1254	1254 SOIL
Aroclor 1254	yes	54	1	1.1	Soil	ppm	AROCLOR 1254	2 STEP 1254
Aroclor 1254	yes	54	1	1	Wipe	• g/100scm	AROCLOR 1254	1254 WIPE
Arocler 1254	yes	54	1	1.25	Water	ppm	AROCLOR 1254	1254 WATER HIGH
Arocler 1260	yes	60	1.13	1.11	Oil	ppm	AROCLOR 1260	1260 OIL
Araclor 1260	yes	60	1	1.33	Soil	ppm	AROCLOR 1260	1260 SOIL
Aroclor 1260	yes	60	1	1.1	Soil	ppm	AROCLOR 1260	2 STEP 1260
Aroclor 1260	yes	60	1	1	Wipe	• g/100scm	AROCLOR 1260	1260 WIPE
Araclar 1260	yes	60	1	1.25	Water	ppm	AROCLOR 1260	1260 WATER HICH
Askarel A	yes	99	1.13	1.11	Oil	ppm	ASKAREL A	ASKAREL A OIL
Askarel A	yes	99	1	1.33	Soil	ppm	ASKAREL A	ASKAREL A SOIL
Askarel A	yes	99	1	1.1	Soil	ppm	ASKAREL A	2 STEP ASKAREL A
Askarel A	yes	99	1	1	Wipe	• g/100scm	ASKAREL A	ASKAREL A WIFE
Askarel A	yes	99	1	1.25	Water	ppm	ASKAREL A	ASK A WATER

Compound	Blank Subtract	%Chlorine	Size Multiplier	Extraction Multiplier	Matrix	Units	Analyte Label	Method Name
DDT	yes	50	1	1.91	Soil	ppm	DDT	DDT SOIL
Toxaphene	yes	68	I	1.54	Soil	ppm	TOXAPHENE	TOXAPHENE SOIL
Chlordane	yes	69	1	1.42	Soil	ppm	CHLORDANE	CHLORDANE SOIL
PCP*	yes	67	1	2.54	Soil	ppm	PCP	PCPSOIL
Trichloro ethylene	yes	81	I	1.00	Soil	ppm	TRICHLOR	TRICHLOR SOIL
Trichloro ethylene	yes	81	10	1.86	Water	ppb	TRICHLOR	TRICHLOR WATER
1,1,1 Tri- chloro ethane	yes	80	10	2.03	Water	ppb	TRICHLETHA NE	HI TRICITL WATER
Tetrachloro ethylene	yes	86	1	1.00	Soil	ppm	TETRACHLOR	TETRACHLOR SOIL
Tetrachloro ethylene	yes	86	10	1.89	Water	ppb	TETRACHLOR	TETRACHLOR WATER
Methylene Chloride	yes	83	10	13.0	Water	ppb	METHCHLORI DE	METHCHLOR WATER
Vinyl Chloride	yes	57	10	5.36	Water	ppb	VINYLCHLORI DE	VINVECTIOR WATER
Dichloro ethylene	yes	73	10	3.46	Water	ppb	DICHLORETH YLENE	DICHLOR WATER
Chloride	yes	100	1	1	None	ppm	CHLORIDE	CHLORIDE

<sup>\*</sup> Requires two-step solvent system with filter omitted.

## Appendix C: Technical Data

Physical

Size: w = 9'' (230mm)

d = 9.5" (240mm) h = 4.25" (110mm)

Weight: 5 lbs. 12 oz. (2.6 kg) Shipping Weight: 17 lbs. (7.75 kg)

Case: Painted Aluminum

Keypad: 16 Position UV-Resistant Polyester Membrane Keypad

Electrical

Battery Power: Internal 8V Gel Cell (3 Days of Operation on Full Charge)

Line Power: 12 W, 115V or 220V Wall Transformer
Charging: Internal IC Controlled Charging Circuit

Power Management: Automatic Shut-Off After 15 Minutes of Non-Use With

Low-Power Warning and Shut-Off

Digital

Processor: AM188EM

A/D Converter: 24 Bit Auto-Ranging

Memory:

Method Storage: 28 Pre-programed Methods + Up to 22 User Defined Methods

Data Storage: 1800 pts

Input

Range: ±300 mV

Electrode: BNC Connector (Back Panel)Electrode Type:ORION 96-17B Combination

Chloride Electrode

Output

Display: Backlit, 2 x 16 LCD, 0.32" Character Height

Printer: 40 Character Onboard Thermal Printer (Paper Re-Order PN: LP-THP-01)
External Printers: Canon BJC-4300, BJC 250, and BJ-200ex; Epson ActionLaser 1400, and Stylus 740, HP

DeskJet 870Cse, and LaserJet 4000T

Parallel Printer Port: 25-pin Female Connector (bidirectional)

RS-232: Data Upload to PC (L2000DX Data Manager required)

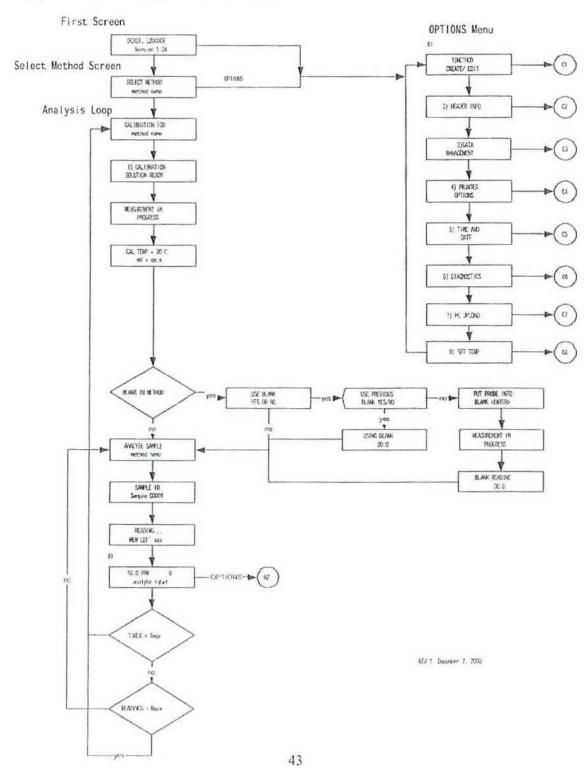
Operating Environment

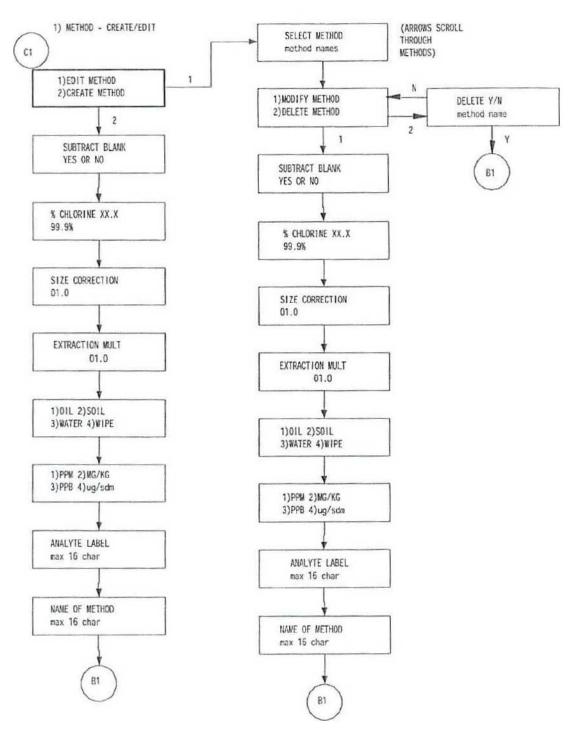
Temperature: 55 °F - 100 °F (13 °C - 38 °C)

Humidity: 85% (non-condensing)

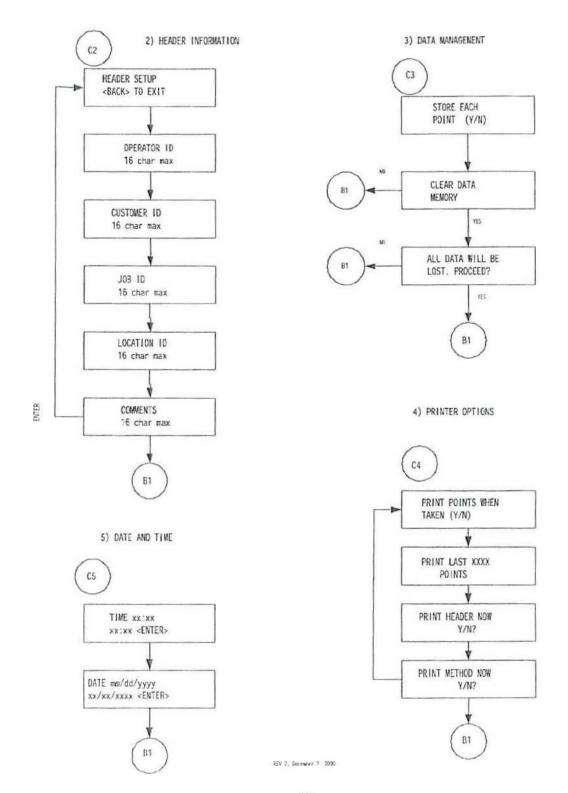
Sunlight: Do Not Operate With Electrode Exposed to Direct or Indirect Sunlight

# Appendix D: Program Flow Chart

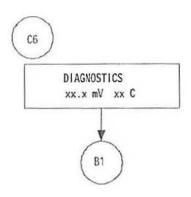




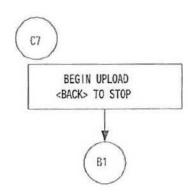
Rev 2 Decemen 1, 2000



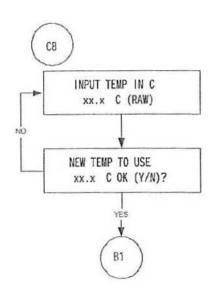
## 6) DIAGNOSTICS



## 7) PC UPLOAD

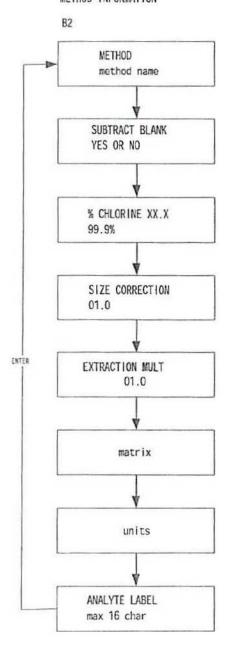


### 8) SET TEMP



REV O. December 7, 2000

### METHOD INFORMATION



ENTER SCROLLS THROUGH METHOD. BACK RETURNS TO A2.

## DEXSIL CORPORATION L2000DX ANALYZER

ONE YEAR LIMITED WARRANTY

DEXSIL CORPORATION warrants the L2000DX Analyzer against defects in material or workmanship for a period of one year from the date of purchase. During the warranty period, any product which is determined by DEXSIL to be defective in material or workmanship and returned to DEXSIL as specified below, will be, as the exclusive remedy, repaired or replaced at DEXSIL's option.

The cost of repair or replacement is included, shipping costs are not and are to be paid by the customer.

In the event that an L2000DX Analyzer is suspected to be defective contact a DEXSIL representative at the address below to obtain a return authorization:

DEXSIL CORPORATION ONE HAMDEN PARK DRIVE HAMDEN, CT 06517 TEL:(203) 288-3509 FAX:(203) 248-6523

Upon return of the unit it will be inspected and a determination will be made as to whether the product is defective. If defective, arrangements will be made for repair or replacement without charge.

THE WARRANTY SET FORTH ABOVE IS EXCLUSIVE AND NO OTHER WARRANTY, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED. DEXSIL SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

DEXSIL CORPORATION IS NOT LIABLE FOR INDIRECT OF CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE USE OF THE PRODUCT.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

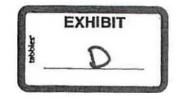
This Warranty applies only to parts or components which are defective and does not cover repairs necessary due to normal wear, misuse, or accidents.

All warranty repairs reimbursable under this warranty must be performed by DEXSIL CORPORATION or its representative using approved replacement parts.

Repairs or attempted repairs by anyone other than a DEXSIL representative are not reimbursable under this warranty. In addition, these unauthorized repair attempts may result in additional malfunctions, the correction of which is not covered by warranty.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.





September 16, 2016

(b)(6) 244 Pecan Drive Cheraw, SC 29520

Dear (b)(6)

Thank you for allowing the Department to collect soil samples in your yard. During the week of August 22, 2016, we collected samples of the soil near the drainage ditch in your backyard. The samples were collected from ground surface to a depth of 2". The samples were tested to determine the levels of polychlorinated biphenyls (PCBs) in the soil. The attached sheet includes additional information about PCBs.

The table below contains the results of the samples taken on your property. The screening value for PCBs is 1,000 micrograms/kilogram (ug/kg). We use screening values to determine where additional evaluation is needed. Sample locations with PCB results above 1,000 ug/kg require further investigation. Some samples taken on your property also revealed the presence of historically-used pesticides.

Sample ID	Contaminant	Sample Result (ug/kg)
BL-SS-52	Total PCBs	104000
BL-SS-52A	Total PCBs	220000
BL-SS-52B	Total PCBs	2250
BL-SS-53	Total PCBs	90000
BL-SS-53A	Total PCBs	480

Based on the results, DHEC has determined that additional sampling is needed to determine the extent of this contamination. We will be in your area the week of September 19, 2016, to collect additional samples and distribute information.

Additional information will be shared with you as we continue to investigate this area. As a precautionary measure, DHEC recommends the following safeguards for your family:

- Stay out of the drainage ditch and do not let children or animals play in your backyard near the drainage ditch
- · Wash your hands before eating, sleeping or caring for children
- · Wash your hands after playing or working in the yard
- · Don't let children eat dirt
- Limit the amount of dust entering your home by using a doormat to wipe feet before entering

S.C. Department of Health and Environmental Control

- Wipe off window sills, table tops and other surfaces that children can reach or that are used for eating
- When moving the lawn, avoid running the mover over patches of dirt or wet down dirt areas prior to moving. Avoid moving the area next to the drainage ditch.

Until we confirm that the levels of PCBs in the soil are below the screening level, DHEC recommends that you avoid the area near the drainage ditch in your backyard and minimize the amount of dust and dirt entering your home.

If you have any questions regarding the attached map or information, please give me a call at (803) 898-0816.

Sincerely,

Judy Canova, Project Manager State Remediation Section

Cc: Buck Graham

Donna Moye

File



#### FORMER BURLINGTON INDUSTRIES SITE

The South Carolina Department of Health and Environmental Control (SC DHEC) is conducting soil and sediment sampling in your community. We have found contamination that is very likely the result of historical practices of waste removal from industrial processes prior to the existence of environmental regulations. This DHEC investigation is attempting to determine who may have been responsible for the contamination as well as the best way to address it and develop a clean-up plan.

We have the results of a first round of sampling and are in the process of collecting additional samples so that we can better understand the locations affected. Preliminary data has found elevated concentrations of polychlorinated biphenyls (PCBs) as well as some pesticides that are above the EPA's Residential Regional Screening Levels between Pecan Drive and the former Burlington Industries facility. We use screening values to determine if or where additional evaluation is needed.

When we are investigating areas of historical environmental contamination, we make recommendations to citizens about things that you can do to prevent potential future exposure(s). As a precautionary measure, if you live along the side of Pecan Drive or Robinhood Drive that backs up to the ditch, DHEC recommends the following safeguards for your family:

- Do not walk in the drainage ditch behind the houses on Pecan Drive and the houses on Robinhood Drive or let children or pets play in back yards near the drainage ditch.
- · Wash your hands before eating or sleeping, or caring for children.
- Wash your hands after playing or working in the yard.
  Don't let children eat dirt.
- Limit the amount of dust entering your home by using a doormat to wipe feet before
- When mowing the lawn, avoid running the mower over patches of dirt or, alternatively, wet down dirt areas prior to mowing. Avoid mowing the area next to the drainage ditch.

DHEC is still in the investigation phase and will be conducting additional sampling in your area the week of September 19th, 2016. Additional information will be shared with you as we continue our investigation. Once we have the results of this next round of sampling, a community meeting will be scheduled to discuss the results as well as the next steps. If your yard has been sampled or is sampled in the future, you will receive the results as soon as they are available.

### Polychlorinated Biphenyls (PCBs) Information Sheet

#### What are PCB's?

PCB stands for polychlorinated biphenyls. This is not one chemical, but a class made up of 209 chemicals. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. PCBs have no known taste or smell. PCBs were used in manufacturing processes from 1929 until they were banned in 1979.

#### How were PCBs used?

Historically, PCBs were used as coolants and lubricants in transformers, capacitors and other electrical equipment because they are good insulators and don't burn. PCBs were also historically used as fluids in old florescent lighting fixtures and electrical transformers, as well as in products like cutting oils, hydraulic oils, and carbonless copy paper.

In 1979, the United States banned the manufacture of PCBs because they were found to be harmful to people and the environment. However, once PCBs are in the environment, they do not break down easily and may remain where they were released for very long periods of time.

### Where are PCBs found today?

Because PCBs were used for so long prior to being regulated, low levels are found throughout the environment; typically in soils and in sediments in streams, rivers or ponds. They are sometimes found at higher levels in areas where they were disposed of prior to environmental regulations or where they have been illegally dumped.

#### How can PCBs harm me and my family?

In this situation of historical contamination, PCBs are primarily a hazard through skin contact. The precautions found on the other side of this page are ways you can reduce your potential for exposure to these chemicals. The most common health effects from exposure to PCBs is from workplace exposure (mostly historical) to the liquid oils through contact with the skin. PCBs are associated with skin rashes and a specific type of acne. Workplace exposures have also been associated with changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects.

#### Where can I find more information about PCBs?

For additional information about PCBs, potential health effects, clean-up and disposal of waste, please visit the U. S. Environmental Protection Agency's website at <a href="https://www.epa.gov/PCBs">www.epa.gov/PCBs</a>.

If you would like additional information about the hazards of PCB's, please refer to the full ToxFAQ sheet produced by the Centers for Disease Control and Prevention's Agency for Toxic Substances and Disease Registry located: http://www.atsdr.cdc.gov/toxfaqs/tfacts17.pdf

Client:synTerra

Description: BL-SS-52

Date Sampled:08/25/2016 1700

| Date Received: 08/26/2016

Arocior 1254

Arodor 1260

Laboratory ID:RH26003-009

Matrix: Solid

6000

6000

% Solids: 83.2 08/26/2016 2125

ug/kg .

ug/kg

Run Pre	P Method 3546	Cleanup Analy 3660B/3665A	tical Method Dilut 8082A 50		vsls Date Analyst 2016 1010 MEM	LUI KINGGAA		Batch 00 21229		
Paramete	or			CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Aroclor 10	016		126	74-11-2	8082A	ND		6000	ug/kg	1
Aroclor 12	221		111	04-28-2	8082A	ND		6000	ug/kg	1
Arocler 12	232		111	41-16-5	8082A	ND		6000	ug/kg	1
Aroclar 12	242		534	69-21-9	8082A	ND		6000	ug/kg	1
Aroclor 1	248		126	72-29-6	8082A	41000		6000	ug/kg	1

8082A

8082A

63000

ND

11097-69-1

11096-82-5

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		123	41-132
Tetrachloro-m-xylene	N	126	35-106

PQL - Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range H = Out of holding time

" - Not detected at or above the PQL J = Estimated result < PQL and > MDL

P = The KPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Client:synTerra

Description: BL-SS-52A

Date Sampled:08/25/2016 1025

Date Received: 08/26/2016

Laboratory ID: RH26003-012

Matrix: Solid

% Solids: 85.5 08/26/2016 2125

Run	Prep Method	Cleanup	Analytical Method	Dilution	Analysis Date Analyst	Prep Date	Batch
1	3546	3660B/3665/	8082A	1000	09/07/2016 1036 MEM	09/02/2016 1100	21229

Parameter	CAS Number	Analytical Method	Result Q	PQL	Units	Run
Aroclor 1016	12674-11-2	8082A	ND	11000	ug/kg	1
Aroclor 1221	11104-28-2	8082A	ND	11000	ug/kg	7
Aroclor 1232	11141-16-5	8082A	ND	11000	ug/kg	1
Aroclor 1242	53469-21-9	8082A	ND	11000	ug/kg	1
Aroclor 1248	12672-29-6	8082A	110000	11000	ug/kg	1
Aroclor 1254	11097-69-1	8082A	110000	11000	ug/kg	1
Aroclor 1260	11096-82-5	8082A	ND	11000	ug/kg	1
Surrogate .	Run 1 Accepts Q % Recovery Lim					241

Decachlorobiphenyl N 1320 41-132 Tetrachloro-m-xylene N 1110 35-106

Where applicable, all soil cample analysis are reported on a dry weight basis unless flagged with a "W"

Client:synTerra

Description: BL-SS-52B

Date Sampled:08/25/2016 1017 -

Laboratory ID: RH26003-006

Matrix: Solid

% Solids: 76.9 08/26/2016 2125

| Date Received: 08/26/2016

Tetrachloro-m-xylene

Run Prep Method Cleanup Analytical Method Dilution Analysis Date Analyst Prep Date Batch 3546 3660B/3665A 8082A 09/07/2016 1401 MEM 09/02/2016 1925 21292 .1 10

Parameter	CAS Number	Analytical Method	Result Q	PQL	Units	Run
Arador 1016	12674-11-2	8082A	ND	130	ug/kg	1
Aroclor 1221	11104-28-2	8082A	ND	130	ug/kg	1
Arodor 1232	11141-16-5	8082A	ND	130	ug/kg	1
Aroclor 1242	53469-21-9	8082A	ND	130	ug/kg	1
Aroclor 1248	12672-29-6	8082A	850	130	ug/kg	1
Aroclor 1254	11097-69-1	8082A	1400	139	ug/kg	1
Aradiar 1260	11096-82-5	8082A	ND	130	ug/kg	1
Surrogate	Run 1 Accepta Q % Recovery Lim					
Decechlorobiphenyl	112 41-13	32				

35-106

PQL = Practical quantitation limit

II = Dotected in the method blank

E = Cuantitation of compound excended the calibration range <math>H = Out of holding time

= Not detected at or above the POL

J = Estimated result < PQL and > MDL

P = The RPD between two GC columns exceeds 40%.

N = Recovery Is out of criteria

ire applicable, all soil sample analysis are reported on a dry weight basis unloss flagged with a "W"

Client:synTerra

Description: BL-SS-53

Date Sampled:08/24/2016 1657

Date Received: 08/26/2016

Laboratory ID: RH26003-025

Matrix: Solid

% Solids: 88.1 08/26/2016 2125

Run	Prep Method	Cleanup Ar	nalytical Method	Dilution	Analysis Date Analyst	Prep Date E	Batch
1	3546	3660B/3665A	8082A	500	09/02/2016 1528 MEM	08/31/2016 2206 2	1111

Parameter		CAS Number	Analytical Method	Result Q	PQL	Units	Run
Aroclor 1016		12674-11-2	8082A	ND	5700	ug/kg	1
Aroclor 1221		11104-28-2	8082A	ND	5700	ug/kg	1
Arodor 1232		11141-16-5	8082A	ND	5700	ug/kg	1
Arpolor 1242		53469-21-9	8082A	ND	5700	ug/kg	1
Aroclor 1248		12672-29-6	8082A	42000	5700	ug/kg	1
Aroclor 1254		11097-69-1	8082A	48000	5700	ug/kg	1
Aroclor 1260		11096-82-5	8082A	ND	5700	ug/kg	1
Surrogate	, Q	Run 1 Accept % Recovery Lin		٠			
Decachlorobiphonyl		106 41-1	32				

Tetrachloro-m-xylene

51

35-106

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantilation of compound exceeded the castration range H = Out of holding time

NO = Not detected at or above the PQL

J = Estimated result < PQL and ≥ MDL

F = The RPD between two GC columns exceeds 40%

N = Recovery Is out of criteria.

Client: synTerra

Description: BL-SS-53A

Date Sampled:08/25/2016 1020

Laboratory ID: RH26003-015

Matrix: Solid

% Solids: 86.4 68/26/2016 2125

Date Received: 08/26/2016

Run Prep Method

3546 3660B/3665A

8082A

10

Cleanup Analytical Method Dilution Analysis Date Analyst Prep Date 09/07/2016 1414 MEM 09/02/2016 1925 21292

Decachlorobiphenyl 94 41-132						
Aroclor 1221 1104-28-2 8082A ND 110 Aroclor 1232 11141-16-5 8082A ND 110 Aroclor 1242 53469-21-9 8082A ND 110 Aroclor 1248 12672-29-6 8082A 180 110 Aroclor 1254 11097-69-1 8082A 300 110 Aroclor 1260 11096-82-5 8082A ND 110 Surrogate Q % Recovery Limits Decachlorobiphenyl 94 41-132	Result Q PQL Units I			Nt		Parameter
Aroclor 1232 11141-16-5 8082A ND 110 Aroclor 1242 53469-21-9 8082A ND 110 Aroclor 1248 12672-29-6 8082A 180 110 Aroclor 1254 11097-69-1 8082A 300 110 Aroclor 1260 11096-82-5 8082A ND 110  Surrogate Q % Recovery Limits Decachlorobiphenyl 94 41-132	ND 110 ug/kg	8082A	4-11-2	12674		Araclar 1016
Aroclor 1242 53469-21-9 8082A ND 110 Aroclor 1248 12672-29-6 8082A 180 110 Aroclor 1254 11097-69-1 8082A 300 110 Aroclor 1260 11096-82-5 8082A ND 110  Surrogate Q % Recovery Limits Decachlorobiphenyl 94 41-132	ND . 110 ug/kg	8082A	4-28-2	11104		Aroclor 1221
Aroclor 1248 12572-29-6 8082A 180 110  Aroclor 1254 11097-69-1 8082A 300 110  Aroclor 1260 11096-82-5 8082A ND 110  Surrogate Q % Recovery Limits  Decachlorobiphenyl 94 41-132	ND 110 ug/kg	8082A	1-16-5	11141		Aroclor 1232
Aroclor 1254 11097-69-1 8082A 300 110 Aroclor 1260 11096-82-5 8082A ND 110  Surrogate Q % Recovery Limits  Decachlorobiphenyl 94 41-132	ND 110 ug/kg	8082A	9-21-9	53469		Aroclor 1242
Aroclor 1260 11096-82-5 8082A ND 110    Surrogate   Q % Recovery Limits	180 110 ug/kg	8082A	2-29-6	12672		Aroclor 1248
Surrogate Q % Recovery Limits  Decachlorobiphenyl 94 41-132	300 110 ug/kg	B082A	7-69-1	11097		Aroclor 1254
Surrogate         Q % Recovery         Limits           Decachlorobiphenyl         94         41-132	ND 110 ug/kg	8082A	5-82-5	11096		Aroclor 1260
STATE OF THE PROPERTY OF THE P					Q	Surrogate
Totashlara m valana			41-132	94		Decachlorobiphenyl
retraction-ri-xyana 65 55-100			35-106	89		Tetrachloro-m-xylene

PUL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range H = Out of holding time

- Not detected at or above the PQL

J = Estimated result < PQL and > MDL P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

to applicable, oil soil cample analysis are reported on a dry weight basis coloss Ragged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client:synTerra Description: BL-SS-53 Date Sampled:08/24/2015 1657 Laboratory ID: RH26003-025

Matrix: Solid

% Solids: 88.1 08/26/2016 2125

Date Received: 08/26/2016

Run Prep Method 1 3550C Analytical Method Dilution Analysis Date Analyst 8270D 1

09/08/2016 1653 JCG

Prep Date 08/29/2016 2356 20899

Batch

Parameter	CAS Number	Analytical	Result Q	PQL	Units	Run
Acenaphthene	83-32-9	Method 8270D	ND	370	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND	370	ug/kg	1
Acetophenone	98-86-2	8270D	ND	370	ug/kg	1
Anthracene	120-12-7	8270D	ND	370	ug/kg	1
Atrazine	1912-24-9	8270D	ND	370	ug/kg	1
Benzeldehyde	100-52-7	8270D	ND	920	ug/kg	1
Bonzo(a)anthracene	56-55-3	8270D	ND	370	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND	370	up/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND	370	ug/kg	1
Benzo(g,h,l)perylene	191-24-2	8270D	ND	370	ug/kg	1
Benzo(k)fluoranthene	207-D8-9	8270D	ND	370	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND	370	ug/kg	. 1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND	370	ug/kg	1
Butyl benzyl phthalate	85-G8-7	8270D	ND	370	ug/kg	1
Caprolaulam	105-80-2	3270D	ND	920	ug/kg	1
Carbazole	86-74-8	8270D	ND	370	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND	370	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND	370	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND	370	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND .	370	ug/kg	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND	370	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND	370	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND	370	ug/kg	1
1-Chlorophenyl phenyl ether	7005-72-3	8270D	ND	370	ug/kg	1
Chrysene	218-01-9	8270D	ND	370	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND .	370	ug/kg	- 1
Di-n-octylphthalate	117-84-0	8270D	ND	370	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND	370	ug/kg	1
Olbenzofuran	132-64-9	6270D	ND	370	ug/kg	1
3.3'-Dichlorobenzidine	91-94-1	8270D	ND	920	ug/kg	1
2,4-Dichlorophenol	120-83-2	82700	. ND	370	ug/kg	1
Dethylphthalate	84-56-2	8270D	ND	370	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND	370	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND	370	ug/kg	1
I,6-Dinitro-2-methylphenol	534-52-1	8270D	ND .	920	ug/kg	1
4-Dinitrophenol	51-28-5	B270D	ND	920	ug/kg	1
4-Dinitrotoluene	121-14-2	8270D	ND	370	ug/kg	1
.6-Dinitrotoluene	506-20-2	8270D	ND	370	ug/kg	1
is(2-Ethylhexyl)phthalate	117-81-7	8270D	370	370	ug/kg	1
luoranthene	206-44-0	8270D	ND	370	ug/kg	1
luorene	86-73-7	8270D	ND	370	ug/kg	1
lexachiorobenzene	118-74-1	82700	ND	370	ug/kg	1
lexachlorobutadiene	87-68-3	8270D	ND	370	ug/kg	1
lexachlorocyclopentadiene	77-47-4	8270D	ND	920	ug/kg	1

PQL = Practical quantitation limit

B = Detected in the mathad black

E = Quantillation of compound exceeded the calibration range H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQI, and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criter'a

Where applicable, oil soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: synTerra

Description: BL-SS-53

Laboratory ID: RH26003-025

Matrix: Solid

% Solids: 88.1 08/26/2016 2125

Date Sampled:08/24/2016 1657 Date Received: 08/26/2016

Run	Prep Method	Analytical Method	Dilution	Analysis Date Analyst	Prep Date Batch	
1	3550C	8270D	1	09/06/2016 1653 JCG	08/29/2016 2356 20899	

Parameter		CAS Number	Analytical Method	Result Q	PQL	Units	Run
Hoxachloroethane		67-72-1	8270D	ND	370	ug/kg	1
Indeno(1,2,3-c,d)pyrene		193-39-5	8270D	ND	370	ug/kg	1
Isophorone		78-59-1	8270D	ND	370	ug/kg	1
2-Mothylnaphthalene		91-57-6	8270D	ND	370	ug/kg	-1
2-Methylphenol		95-48-7	8270D	ND	370	ug/kg	1
3+4-Methylphenol		106-44-5	8270D	ND	740	ug/kg	1
N-Nitrosodi-n-propylamine		621-64-7	8270D	ND	370	ug/kg	1
N-Nitrosodiphenylamine (Dipher	nylamine)	86-30-6	8270D	ND	370	ug/kg	1
Naphthalene		91-20-3	8270D	ND	370	ug/kg	7
2-Nttroaniline		88-74-4	8270D	ND	370	ug/kg	1
3-Nitroaniline		99-09-2	8270D	ND .	370	ug/kg	1
4-Nitroaniline		100-01-6	8270D	ND	370	ug/kg	1
Nitrobenzene		98-95-3	8270D	ND	370	ug/kg	1
2-Nitrophenol		88-75-5	8270D	ND	370	ug/kg	1
4-Nitrophenol		100-02-7	8270D	ND	920	ug/kg	1
Pentachlorophenol		87-86-5	8270D	ND	920	ug/kg	1
Phenanthrone		85-01-8	8270D	ND	370	ug/kg	1
Phenol		108-95-2	8270D	ND	370	ug/kg	1
yrene		129-00-0	8270D	ND	370	ug/kg	1
4,5-Trichlorophenol		95-95-4	8270D	ND	370	ugi/kg	1
.4.6-Trichlorophenol		88-06-2	8270D	ND	370	ug/kg	1

Surrogate	Run 1 Acceptance Q % Recovery Limits	
2,4,6-Tribromophenol	78 30-117	
2-Fluoroblphenyl	61 33-102	
2-Fluorophenol	63 28-104	
Nttrobenzene-d5	61 22-109	
Phenol-d5	65 27-103	
Terphenyl-d14	80 41-120	

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range H = Out of holding time

= Not detected at or above the PQL re applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

N = Recovery Is out of criteria

## Organochlorine Pesticides by GC

Client:synTerra

Description: BL-SS-53

Date Sampled:08/24/2016 1657

Date Received: 08/26/2016

Laboratory ID:RH26003-025

Matrix: Solid

% Solids: 88.1 08/26/2016 2125

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8081B	50	09/02/2016 1311	PMS	08/31/2016 2206	21110

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Aldrin	309-00-2	8081B	ND		57	ug/kg	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		57	ug/kg	1
alpha-BHC	319-84-6	8081B	ND		57	ug/kg	1
beta-BHC	319-85-7	8081B	ND		57	ug/kg	1
delta-BHC	319-86-8	8081B	ND		57	ug/kg	1
Chlordane	57-74-9	8081B	ND		110	ug/kg	1
cfs-Chlordane	5103-71-9	8081B	ND		57	ug/kg	1
trans-Chlordane	5103-74-2	8081B	. 1200		57	ug/kg	1
4,4'-DDD	72-54-8	8081B	61	P	57	ug/kg	1
4,4'-DDE	72-55-9	8081B	57	P	57	ug/kg	1
4,4'-DDT	50-29-3	8081B	1300		57	ug/kg	1
Dieldrin	60-57-1	8081B	2200		57	ug/kg	1
Endosulfan I	959-98-8	8081B	ND		57	ug/kg	1
Endosulfan II	33213-65-9	8081B	ND		57	ug/kg	1
Endosulfan sulfate	1031-07-8	8081B	130		57	ug/kg	1
Endrin	72-20-8	8081B	290	P	57	ug/kg	1
Endrin aldehyde	7421-93-4	8081B	100	P	57	ug/kg	1
Endrin ketone	53494-70-5	8081B	220		57	ug/kg	1
Heptachlor	76-44-8	B081B	ND		57	ug/kg	1
Heptachlor epoxide	1024-57-3	8081B	120	P	57	ug/kg	1
Methaxychlor	72-43-5	8081B	ND		230	ug/kg	1
Foxaphene	8001-35-2	8081B	ND		570	ug/kg	1
Surrogate	Run 1 Accepta Q % Recovery Lim	ince its					
Decachlorobiphenyl	N 124 57-1	10					

59 37-91 Tetrachloro-m-xylene

PQL = Practical quantitation fimit

B = Detected in the method blank

E = Quantilation of compound exceeded the calibration range H = Out of holding time

N = Recovery is out of criteria

ND = Not delected at or above the PQL J = Estimated result < PQL and > MDL P = The RPD between two GC columns exceeds 40%

### TAL Metals

Client: synTerra

Description: BL-SS-53

Date Received: 08/26/2016

Date Sampled:08/24/2016 1657

Laboratory ID: RH26003-025

Matrix: Solid

% Solids: 88.1 08/26/2016 2125

Batch Prep Date Analytical Method Dilution Analysis Date Analyst Run Prep Method 08/29/2016 0935 20870 7471B 1 08/30/2016 1231 CLM 1 7471B 6010C 1 09/03/2016 1504 CJZ 08/31/2016 1101 21039 1 3050B 6010C 1 09/07/2016 1352 CJZ 08/31/2016 1101 21039 3 3050B

	CAS	Analytical				
Parameter	Number	Method	Result Q	PQL	Units	Run
Aluminum	7429-90-5	6010C	11000	16	mg/kg	3
Antimony	7440-36-0	6010C	ND	0.79	mg/kg	1
Arsenic	7440-38-2	6010C	1.7	0.59	mg/kg	1
Barium	7440-39-3	6010C	24	1.0	mg/kg	3
Beryllium	7440-41-7	6010C	ND	0.20	mg/kg	3
Cadmium	7440-43-9	6010C	, ND	0.20	mg/kg	1
Calcium	7440-70-2	6010C	390	200	mg/kg	1
Chromium	7440-47-3	6010C	15	0.39	mg/kg	1
Cobalt	7440-48-4	6010C	ND	1.0	rng/kg	1
Copper	7440-50-8	6010C	5.5	0.39	mg/kg	1
Iron	7439-89-6	6010C	9000	3.9	mg/kg	3
Lead	7439-92-1	6010C	8.7	0.39	mg/kg	1
Magnesium	7439-95-4	6010C	240	200	mg/kg	1
Manganese	7439-96-5	6010C	38	0.59	mg/kg	1
Mercury	7439-97-6	7471B	ND	0.090	mg/kg	1
Nickel	7440-02-0	6010C	3.3	1.6	mg/kg	1
Potassium	7440-09-7	6010C	ND	200	mg/kg	3
Selenium	7782-49-2	6010C	ND	0.79	mg/kg	1
liver	7440-22-4	6010C	ND	0.39	mg/kg	1
Sodium	7440-23-5	6010C	ND	200	mg/kg	3
Thallium	7,440-28-0	6010C	ND	2.0	mg/kg	1
Vanadium	7440-62-2	6010C	24	2.0	mg/kg	1
Zinc	7440-66-6	6010C	2.1	2.0	mg/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range <math>-H = Quillet Polyting time

Not detected at probove the PQL

J = Estimated result < PCL and ≥ MDL P = The RPD between two GC columns except 40%

N = Recovery is out of criteria

in applicable, all soil sample analysis are reported on a dry weight back unless dagged with a "W"

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September 16, 2016

(b)(6) Personal 238 Pecan Drive Cheraw, SC 29520

Dear (b)(6)

Thank you for allowing the Department to collect soil samples in your yard. During the week of August 22, 2016, we collected samples of the soil near the drainage ditch in your backyard. The samples were collected from ground surface to a depth of 2". The samples were tested to determine the levels of polychlorinated biphenyls (PCBs), historically-used pesticides, and other contaminants that may be in the soil. The attached sheet includes additional information about PCBs.

The table below contains the results of the samples taken on your property. The screening value for PCBs is 1,000 micrograms/kilogram (ug/kg). We use screening values to determine where additional evaluation is needed. Sample locations with PCB results above 1,000 ug/kg require further investigation. Some samples taken on your property also revealed the presence of historically-used pesticides.

Sample ID	Contaminant	Sample Result (ug/kg)
BL-SS-48	Total PCBs	1,080,000
BL-SS-48A	Total PCBs	12,800
BL-SS-48B	Total PCBs	10,800

Based on the results, DHEC has determined that additional sampling is needed to determine the extent of this contamination. We will be in your area the week of September 19, 2016, to collect additional samples and distribute information.

Additional information will be shared with you as we continue to investigate this area. As a precautionary measure, DHEC recommends the following safeguards for your family:

- Stay out of the drainage ditch and do not let children or animals play in your backyard near the drainage ditch
- Wash your hands before eating, sleeping or caring for children
- · Wash your hands after playing or working in the yard
- Don't let children eat dirt
- Limit the amount of dust entering your home by using a doormat to wipe feet before entering

- Wipe off window sills, table tops and other surfaces that children can reach or that are used for eating
- When mowing the lawn, avoid running the mower over patches of dirt or wet down dirt areas prior to mowing. Avoid mowing the area next to the drainage ditch.

Until we confirm that the levels of PCBs in the soil are below the screening level, DHEC recommends that you avoid the area near the drainage ditch in your backyard and minimize the amount of dust and dirt entering your home.

If you have any questions regarding the attached map or information, please give me a call at (803) 898-0816.

Sincerely,

Judy Canova, Project Manager State Remediation Section

Cc: Buck Graham

Donna Moye

File



#### FORMER BURLINGTON INDUSTRIES SITE

The South Carolina Department of Health and Environmental Control (SC DHEC) is conducting soil and sediment sampling in your community. We have found contamination that is very likely the result of historical practices of waste removal from industrial processes prior to the existence of environmental regulations. This DHEC investigation is attempting to determine who may have been responsible for the contamination as well as the best way to address it and develop a clean-up plan.

We have the results of a first round of sampling and are in the process of collecting additional samples so that we can better understand the locations affected. Preliminary data has found elevated concentrations of polychlorinated biphenyls (PCBs) as well as some pesticides that are above the EPA's Residential Regional Screening Levels between Pecan Drive and the former Burlington Industries facility. We use screening values to determine if or where additional evaluation is needed.

When we are investigating areas of historical environmental contamination, we make recommendations to citizens about things that you can do to prevent potential future exposure(s). As a precautionary measure, if you live along the side of Pecan Drive or Robinhood Drive that backs up to the ditch, DHEC recommends the following safeguards for your family:

- Do not walk in the drainage ditch behind the houses on Pecan Drive and the houses on Robinhood Drive or let children or pets play in back yards near the drainage ditch.
- · Wash your hands before eating or sleeping, or caring for children.
- Wash your hands after playing or working in the yard.
- · Don't let children eat dirt.
- Limit the amount of dust entering your home by using a doormat to wipe feet before entering.
- When mowing the lawn, avoid running the mower over patches of dirt or, alternatively, wet down dirt areas prior to mowing. Avoid mowing the area next to the drainage ditch.

DHEC is still in the investigation phase and will be conducting additional sampling in your area the week of September 19<sup>th</sup>, 2016. Additional information will be shared with you as we continue our investigation. Once we have the results of this next round of sampling, a community meeting will be scheduled to discuss the results as well as the next steps. If your yard has been sampled or is sampled in the future, you will receive the results as soon as they are available.

## Polychlorinated Biphenyls (PCBs) Information Sheet

#### What are PCB's?

PCB stands for polychlorinated biphenyls. This is not one chemical, but a class made up of 209 chemicals. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. PCBs have no known taste or smell. PCBs were used in manufacturing processes from 1929 until they were banned in 1979.

#### How were PCBs used?

Historically, PCBs were used as coolants and lubricants in transformers, capacitors and other electrical equipment because they are good insulators and don't burn. PCBs were also historically used as fluids in old florescent lighting fixtures and electrical transformers, as well as in products like cutting oils, hydraulic oils, and carbonless copy paper.

In 1979, the United States banned the manufacture of PCBs because they were found to be harmful to people and the environment. However, once PCBs are in the environment, they do not break down easily and may remain where they were released for very long periods of time.

### Where are PCBs found today?

Because PCBs were used for so long prior to being regulated, low levels are found throughout the environment; typically in soils and in sediments in streams, rivers or ponds. They are sometimes found at higher levels in areas where they were disposed of prior to environmental regulations or where they have been illegally dumped.

### How can PCBs harm me and my family?

In this situation of historical contamination, PCBs are primarily a hazard through skin contact. The precautions found on the other side of this page are ways you can reduce your potential for exposure to these chemicals. The most common health effects from exposure to PCBs is from workplace exposure (mostly historical) to the liquid oils through contact with the skin. PCBs are associated with skin rashes and a specific type of acne. Workplace exposures have also been associated with changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects.

### Where can I find more information about PCBs?

For additional information about PCBs, potential health effects, clean-up and disposal of waste, please visit the U. S. Environmental Protection Agency's website at <a href="https://www.epa.gov/PCBs">www.epa.gov/PCBs</a>.

If you would like additional information about the hazards of PCB's, please refer to the full ToxFAQ sheet produced by the Centers for Disease Control and Prevention's Agency for Toxic Substances and Disease Registry located: <a href="http://www.atsdr.cdc.gov/toxfaqs/tfacts17.pdf">http://www.atsdr.cdc.gov/toxfaqs/tfacts17.pdf</a>

Client: synTerra

Description: BL-SS-48

Date Sampled:08/24/2016 1648

Date Received: 03/26/2016

Laboratory ID: RH26003-018

Matrix: Solid

% Solids: 92.9 08/26/2016 2125

Run	Prep Method	Cleanup Analy	tical Method	Dilution	Analysis Date An	nalyst	Prep Date	Batch
1	3546	3660B/3665A	8082A	2000	09/02/2016 1502 N	MEM	08/31/2016 2206	21111

Parameter	CAS Number	Analytical Method	Result Q	PQL	Units	,Run
Aroclor 1016	12674-11-2	8082A	ND	21000	ug/kg	1
Aroclor 1221	11104-28-2	8082A	ND	21000	ug/kg	1
Aroclor 1232	11141-16-5	8082A	ND	21000	ug/kg	1
Araclor 1242	53469-21-9	8082A	ND	21000	ug/kg	1
Aroclor 1248	12672-29-6	8082A	490000	21000	ug/kg	1
Aroclor 1254	11097-69-1	8082A	590000	21000	ug/kg	1
Aroclor 1260	11096-82-5	. 8082A	ND	21000	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptanc Limits
Decachlorobiphenyl	N	524	41-132
Tetrachloro-m-xylene		71	35-106

PQL = Proctical quantitation timit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range H = Out of holding time

n = Not detected at or above the PQL

J = Fishmaled result < POL and ≥ MOL P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

are applicable, all self-sample analysis are reported on a dry weight basis unless flagged with a "W"

ClientsynTerra

Description: BL-SS-48A

Date Sampled:08/25/2016 1000

Date Received: 08/26/2016

Totrachloro-m-xylene

Laboratory ID: RH26003-002

Matrix: Solid

% Solids: 85.4 08/26/2016 2125

Run	Prep Method	Cleanup	Analytical Method	Dilution	Analysis Date Analyst	Prep Date	Batch
1	3546	3660B/3665A	8082A	50	09/06/2016 1320 MEM	09/02/2016 1100	21229

93

Parameter	CAS Number	Analytical Method	Result Q	PQL	Units	Run
Aroclor 1016	12674-11-2	8082A	ND	560	ug/kg	1
Aroclor 1221	11104-28-2	8082A	ND	560	ug/kg	1
Aroclor 1232	11141-16-5	8082A	ND	560	ug/kg	1
Aroclor 1242	53469-21-9	8082A	ND	560	ug/kg	1
Aroclor 1248	12672-29-6	8082A	4900	560	ug/kg	1
Aroclor 1254	11097-69-1	8082A	7900	- 560	ug/kg	1
Aroclor 1260	11096-82-5	8082A	ND	560	ug/kg	1
Surrogate	Run 1 Accept Q % Recovery Lin			•		
Decachlorobiphenyl	129 41-1	32				

35-106

POL = Practical quantitation imit

B = Detected in the medical blank

E = Quantitation of compound exceeded the calibration range H = Out of holding time

ND = Not delected at at above the PQL

J = Ecilmated result < PQL and ≥ MQL P = The RFD between two GC columna exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: synTerra

Description: BL-SS-48B

Laboratory ID: RH26003-005

Matrix: Solid

Date Sampled:08/25/2016 1004 % Solids: 90.9 08/26/2016 2125

Date Received: 08/26/2016

Run Prep Method Cleanup Analytical Method Dilution Analysis Date Analyst Prep Date Batch 3546 3660B/3665A 09/07/2016 0956 MEM 09/02/2016 1100 21229 B082A 50

	CAS	Analytical					
Parameter	Number	Method	Result C	2	PQL	Units	Run
Aroclor 1016	12674-11-2	8082A	ND	*	540	ug/kg	1
Aroclor 1221	11104-28-2	8082A	ND		540	ug/kg	1
Aroclor 1232	11141-16-5	8082A	ND		540 .	ug/kg	1
Aroclor 1242	53469-21-9	8082A	ND		540	ug/kg	1
Aroclor 1248	12672-29-6	8082A	4100		540	ug/kg	1
Aroclor 1254	11097-59-1	8082A	6700		540	ug/kg	1
Aroclor 1260	11096-82-5	8082A	ND		540	ug/kg	1

Surrogate	Q	% Recovery	Limits
Decachloroblphenyl		122	41-132
Tetrachloro-m-xylene		103	35-106

PCL \* Practical quantitation limit

B = Detected in the reethod blank

 $E = \Omega institution of compound exceeded the calibration range.$ P = The RPD between two GC co'umno exceeds 46%

H = Out of holding lime

- Not seterated at or above the PQL  $J = \text{Estimated result} < PQL and <math>\geq MCL$ re applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "V/"

## Semivolatile Organic Compounds by GC/MS

Client:synTerra

Description: BL-SS-48

Date Sampled:08/24/2016 1648

Date Received: 08/26/2016

Laboratory ID: RH26003-018

Matrix: Solid

% Solids: 92,9 08/26/2016 2125

Run Prep Method Analytical Method Dilution Analysis Date Analyst Prep Date 08/29/2016 2356 20899 09/02/2016 1656 JCG 1 3550C 8270D

Parameter	CAS Number	Analytical Method	Result Q	PQL	Units	Run
Acenaphthene	B3-32-9	8270D	ND	350	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND	350	ug/kg	1
Acetophenone	98-86-2	8270D	ND	350	ug/kg	1
Anthracene	120-12-7	8270D	ND	350	ug/kg	1
Atrazine .	1912-24-9	8270D	ND	350	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND	880	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND	350	ug/kg	1
Benzo(a)pyreno	50-32-B	8270D	ND	350	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND	350	ug/kg	1
Benzo(g,h,l)perylene	191-24-2	8270D	ND	350	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND	350	ug/kg	1
1,1'-Blphenyl	92-52-4	8270D	ND	350	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND	350	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND	350	ug/kg	1
Caprolactam	105-60-2	8270D	ND	880	ug/kg	1
Carbazole	86-74-8	8270D	ND	350	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND	350	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND	350	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	6270D	ND	350	ug/kg	1
bis(2-Chloroethyl)other	111-44-4	8270D	ND	350	ug/kg	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND	350	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND	350	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND	350	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND	350	ug/kg	1
Chrysena	218-01-9	8270D	ND	350	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND	350	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND	350	ug/kg	3
Dibenzo(a,h)anthracene	53-70-3	8270D	ND	350	цg/kg	1
Dibenzoluran	132-64-9	8270D	ND	350	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND	880	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND	350	ug/kg	1
Diethylphthalate	84-65-2	8270D	ND	350	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND	350	ug/kg	1
,4-Dimethylphenol	105-67-9	B270D	ND	350	ug/kg	1
,G-Dinitro-2-methylphenol	534-52-1	8270D	ND	088	ug/kg	1
,4-Dinitrophonol	51-28-5	8270D	ND	088	ug/kg	1
,4-Dinitrotoluene	121-14-2	8270D	ND	350	ug/kg	1
,6-Dinitrotoluene	606-20-2	8270D	ND	350	ug/kg	1
is(2-Ethylhexyl)phthalate	117-81-7	8270D	ND	350	ug/kg	1
luoranthene	206-44-0	8270D	ND	350	ug/kg	1
luorene	86-73-7	8270D	ND	350	ug/kg	1
exachlorobenzene	118-74-1	\$270D	ND	350	ug/kg	1
exachlorobutadiene	87-68-3	8270D	ND	350	ug/kg	3
exachlorocyclopentadiene -	77-47-4	8270D	ND	880	ug/kg	1

PCL = Practical quantitation limit

B = Defected in the method blank

E = Quantilation of compound exceeded the calibration range H = Out of holding time

ND = Not detected at or above the POL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all sell sample analysis are reported on a dry weight basis unless flagged with a "W"

## Semivolatile Organic Compounds by GC/MS

Client: synTerra

Description: BL-SS-48

Date Sampled:08/24/2016 1648

Date Received: 08/26/2016

Laboratory ID: RH26003-018

Matrix: Solid

% Solids: 92.9 08/26/2016 2125

Run Prep Method 3550C 1

Analytical Method Dilution Analysis Date Analyst Prep Date 8270D 1

09/02/2016 1656 JCG

Batch 08/29/2016 2356 20899

Parameter		CAS Number	Analytical Method	Result Q	PQL.	Units	Run
Hexachloroethane .		67-72-1	8270D	ND	350	ng/kg	1
Indeno(1,2,3-c,d)pyrene		193-39-5	8270D	ND	350	ug/kg	1
Isophorone .		78-59-1	8270D	ND	350	ug/kg	1
2-Methylnaphthalene		. 91-57-6	8270D	ND	350	ug/kg	1
2-Methy:phenol		95-48-7	8270D	ND	350	ug/kg	1
3+4-Methylphenol		106-44-5	8270D	ND	710	ug/kg	1
N-Nitrosodl-n-propylamine		621-64-7	8270D	ND	350	ug/kg	1
N-Nitrosodiphenylamine (Diphenylam	nine)	86-30-6	8270D	ND	350	ug/kg	1
Naphthalene		91-20-3	8270D	ND	350	ug/kg	1
2-Nitroanlline	4	88-74-4	8270D	ND	350	ug/kg	1
3-Nitroaniline		99-09-2	8270D	ND'	350	ug/kg	1
4-Nitroaniline		100-01-6	8270D	ND	360	ug/kg	1
Nitrobenzane		98-95-3	8270D	ND	350	ug/kg	1
2-Nitrophenol	(4)	88-75-5	8270D	ND -	350	ug/kg	1
4-Nitrophenol		100-02-7	8270D	ND	088	ug/kg	1
Pentachlorophenol		87-86-5	8270D	ND	880	ug/kg	1
Phenanthrene		85-01-8	8270D	ND	350	ug/kg	1
Phonol		108-95-2	8270D	ND	350	ug/kg	1
Pyrene		129-00-0	8270D	ND	350	ug/kg	1
2,4,5-Trichlorophenol		95-95-4	8270D	ND	350	ug/kg	1
,4,6-Trichlorophenol		88-06-2	8270D	ND	350	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		73	3D-117
2-Fluorobiphenyl		64	33-102
2-Fluorophenol		59	28-104
Nitrobenzene-d5		62	22-109
Phenol-d5		65	27-103
Terphenyl-d14		87	41-120

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B - Detected in the method blank

E = Quantilation of compound exceeded the calibration range | H = Out of holding time

a Not detected at or above the POL.

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

## Organochlorine Pesticides by GC

Client:synTerra Description: BL-SS-48

Date Sampled:08/24/2016 1648

Date Received: 08/26/2016

Laboratory ID:RH26093-018

Matrix: Solid

% Solids: 92.9 08/26/2016 2125

Run Prep Method 1 3548 Analytical Method Dilution Analysis Date Analyst Prep Date 8081B 1000

09/02/2016 1113 PMS 08/31/2016 2205 21110

Batch

Parameter		N	CAS A	Analytical Method	Result	Q	PQL	Units	Run
Aldrin		30	9-00-2	8081B	ND		1000	ug/kg	1
gamma-BHC (Lindane)		.5	8-89-9	80818	ND		1000	ug/kg	1
alpha-BHC		31	9-84-6	B081B	ND		1000	ug/kg	1
beta-BHC		31	9-85-7	8081B	ND		1000	ug/kg	1
delta-BHC		31	9-86-8	B081B	ND		1060	ug/kg	1
Chlordane		5	7-74-9	B081B	ND		2100	ug/kg	1
cis-Chlordane		510	3-71-9	B081B	ND		1000	ug/kg	1
trans-Chlordane		510	3-74-2	8081B	14000		1000	ug/kg	1
4,4'-DDD		7:	2-54-8	B081B	ND		1000	ug/kg	1
4,4'-DDE		7:	2-55-9	8081B	9300	P	1000	ug/kg	1
4,4'-DDT		51	0-29-3	8081B	15000		- 1000	ug/kg	1
Dieldrin		61	0-57-1	8081B	28000		1000	ug/kg	1
Endosulfan I		959	9-98-8	8081B	2500	P	1000	ug/kg	1
Endosulfan II		33213	3-65-9	8081B	4400	P	1000	ug/kg	1
Endosulfan sulfate		1031	1-07-8	8081B	ND	VV-4/V	1000	ug/kg	1
Endrin		72	2-20-8	8081B	3100	P	1000	ug/kg	1
Endrin aldehyde		7421	1-93-4	8081B	2800		1000	ug/kg	1
Endrin ketone		53494	-70-5	8081B	ND		1000	ug/kg	1
Heptachlor	8)	76	-44-B	8081B	ND		.1000	ug/kg	1
Heptachlor epoxide		1024	-57-3	8081B	1200	P	1000	ug/kg	1
Methexychlor		72	-43-5	8081B	ND		1200	ug/kg	- 1
Toxaphene		8001	-35-2	8081B	ND		10000	ug/kg	1
Surrogate	Q	Run 1 % Recovery	Acceptance Limits						
Decachlorobiphenyl	N	0.00	57-110				7011		
Tetrachloro-m-xylene	N	0.00	37-91						

POL = Practical quantitation limit

B = Detected in the method black

E = Quantitation of compound exceeded the calibration range ... H = Out of holding time

ND = Not detected at or above the PGL

J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where explicable, all sell sample analysis are reported on a dry weight basis unless flagged with a "W"

### TAL Metals

Client: synTerra

Description: BL-SS-48

Date Sampled:08/24/2016 1648

Laboratory ID:RH26003-D18

Matrix: Solid

% Solids: 92.9 08/26/2016 2125

| Date Received: 08/26/2016

Run	Prop Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7471B	7471B	1	08/30/2016 1350	CLM	08/29/2016 0936	20870
1	3050B	6010C	1	09/03/2016 1432	CJZ	08/31/2016 1101	21039
2	3050B	60100	1	09/07/2016 1301	CJZ	08/31/2016 1101	21039

			CAS	Analytical			**		
Parameter			Number	Method	Result Q	 PQL		Units	Run
Aluminum			7429-90-5	6010C	6300	15		· mg/kg	2
Antimony		*	7440-36-0	6010C	ND	0.77		mg/kg	1
Arsenic			7440-38-2	6010C	2.1	0.58		mg/kg -	1
Barium			7440-39-3	6010C	25	1.0		mg/kg	2
Beryllium			7440-41-7	6010C	ND	0.19		mg/kg	2
Cadmium			7440-43-9	6010C	ND	0.19		mg/kg	1
Calcium			7440-70-2	6010C	280	190		mg/kg	1
Chromium			7440-47-3	6010C	11	0.39		mg/kg	1
Cobalt			7440-48-4	6010C	ND	1.0		mg/kg	1
Copper			7440-50-8	6010C	12	0.39		mg/kg	1
Iron	19.		7439-89-6	6010C	4900	3.9		mg/kg	2
Lead			7439-92-1	6010C	18	0.39		mg/kg	1
Magneslum			7439-95-4	6010C	ND	190		mg/kg	1
Manganese			7439-96-5	6010C	43	0.58		mg/kg	1
Mercury			7439-97-6	7471B	ND	0.087		mg/kg	1
Nickel			7440-02-0	6010C	. 2.1	1.5		mg/kg	1
Potassium			7440-09-7	6010C	ND	190		mg/kg	2
Selenium			7782-49-2	6010C	ND	0.77		mg/kg	1
Silver			7440-22-4	6010C	ND	0.39		rng/kg	1
Sodium			7440-23-5	6010C	ND	190		mg/kg	2
Thallium	**		7440-28-0	6010C	ND	1.9		mg/kg	1
Vanadium			7440-62-2	6010C	13	1.9		mg/kg	1
Zinc			7440-66-6	601DC	31	1.9		mg/kg	1

PQL = Prestoal quantitation limit

B = Detected in the method blenk

E = Quantitation of compound exceeded the calibration range <math>H = Qut of holding time

" = Not detected at or above the PQL

" J = Estimated result < PGL and ≥ MDI

P = The RPD between two GC columns exceeds 40%



September 16, 2016

(b)(6) Personal 232 Pecan Drive Cheraw, SC 29520

Dear (b)(6)

Thank you for allowing the Department to collect soil samples in your yard. During the week of August 22, 2016, we collected samples of the soil near the drainage ditch in your backyard. The samples were collected from ground surface to a depth of 2". The samples were tested to determine the levels of polychlorinated biphenyls (PCBs) that may be in the soil.

The table below contains the results of the samples taken on your property. The screening value for PCBs is 1,000 micrograms/kilogram (ug/kg). We use screening values to determine where additional evaluation is needed. Sample locations with PCB results above 1,000 ug/kg require further investigation.

Sample ID	Contaminant		Sample Result (ug/kg)		
BL-SS-74	Total PCBs		7,400		

Based on the results, DHEC has determined that additional sampling is needed to determine the extent of this contamination. We will be in your area the week of September 19, 2016, to collect additional samples and distribute information.

Additional information will be shared with you as we continue to investigate this area. As a precautionary measure, DHEC recommends the following safeguards for your family:

- Stay out of the drainage ditch and do not let children or animals play in your backyard near the drainage ditch
- · Wash your hands before eating, sleeping or earing for children
- · Wash your hands after playing or working in the yard
- · Don't let children eat dirt
- Limit the amount of dust entering your home by using a doormat to wipe feet before entering
- Wipe off window sills, table tops and other surfaces that children can reach or that are used for eating
- When moving the lawn, avoid running the mover over patches of dirt or wet down dirt areas prior to moving. Avoid moving the area next to the drainage ditch.

Until we confirm that the levels of PCBs in the soil are below the screening level, DHEC recommends that you avoid the area near the drainage ditch in your backyard and minimize the amount of dust and dirt entering your home.

If you have any questions regarding the attached map or information, please give me a call at (803) 898-0816.

Sincerely,

Judy Canova, Project Manager State Remediation Section

Cc:

Buck Graham Donna Moye

File



#### FORMER BURLINGTON INDUSTRIES SITE

The South Carolina Department of Health and Environmental Control (SC DHEC) is conducting soil and sediment sampling in your community. We have found contamination that is very likely the result of historical practices of waste removal from industrial processes prior to the existence of environmental regulations. This DHEC investigation is attempting to determine who may have been responsible for the contamination as well as the best way to address it and develop a clean-up plan.

We have the results of a first round of sampling and are in the process of collecting additional samples so that we can better understand the locations affected. Preliminary data has found elevated concentrations of polychlorinated biphenyls (PCBs) as well as some pesticides that are above the EPA's Residential Regional Screening Levels between Pecan Drive and the former Burlington Industries facility. We use screening values to determine if or where additional evaluation is needed.

When we are investigating areas of historical environmental contamination, we make recommendations to citizens about things that you can do to prevent potential future exposure(s). As a precautionary measure, if you live along the side of Pecan Drive or Robinhood Drive that backs up to the ditch, DHEC recommends the following safeguards for your family:

- Do not walk in the drainage ditch behind the houses on Pecan Drive and the houses on Robinhood Drive or let children or pets play in back yards near the drainage ditch.
- Wash your hands before eating or sleeping, or caring for children.
- · Wash your hands after playing or working in the yard.
- · Don't let children eat dirt.
- Limit the amount of dust entering your home by using a doormat to wipe feet before entering.
- When mowing the lawn, avoid running the mower over patches of dirt or, alternatively, wet down dirt areas prior to mowing. Avoid mowing the area next to the drainage ditch.

DHEC is still in the investigation phase and will be conducting additional sampling in your area the week of September 19<sup>th</sup>, 2016. Additional information will be shared with you as we continue our investigation. Once we have the results of this next round of sampling, a community meeting will be scheduled to discuss the results as well as the next steps. If your yard has been sampled or is sampled in the future, you will receive the results as soon as they are available.

## Polychlorinated Biphenyls (PCBs) Information Sheet

### What are PCB's?

PCB stands for polychlorinated biphenyls. This is not one chemical, but a class made up of 209 chemicals. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. PCBs have no known taste or smell. PCBs were used in manufacturing processes from 1929 until they were banned in 1979.

#### How were PCBs used?

Historically, PCBs were used as coolants and lubricants in transformers, capacitors and other electrical equipment because they are good insulators and don't burn. PCBs were also historically used as fluids in old florescent lighting fixtures and electrical transformers, as well as in products like cutting oils, hydraulic oils, and carbonless copy paper.

In 1979, the United States banned the manufacture of PCBs because they were found to be harmful to people and the environment. However, once PCBs are in the environment, they do not break down easily and may remain where they were released for very long periods of time.

### Where are PCBs found today?

Because PCBs were used for so long prior to being regulated, low levels are found throughout the environment; typically in soils and in sediments in streams, rivers or ponds. They are sometimes found at higher levels in areas where they were disposed of prior to environmental regulations or where they have been illegally dumped.

#### How can PCBs harm me and my family?

In this situation of historical contamination, PCBs are primarily a hazard through skin contact. The precautions found on the other side of this page are ways you can reduce your potential for exposure to these chemicals. The most common health effects from exposure to PCBs is from workplace exposure (mostly historical) to the liquid oils through contact with the skin. PCBs are associated with skin rashes and a specific type of acne. Workplace exposures have also been associated with changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects.

## Where can I find more information about PCBs?

For additional information about PCBs, potential health effects, clean-up and disposal of waste, please visit the U. S. Environmental Protection Agency's website at www.epa.gov/PCBs.

If you would like additional information about the hazards of PCB's, please refer to the full ToxFAQ sheet produced by the Centers for Disease Control and Prevention's Agency for Toxic Substances and Disease Registry located: http://www.atsdr.cdc.gov/toxfaqs/tfacts17.pdf

Client: synTerra

Description: BL-SS-74

Date Sampled:08/25/2016 1110

Date Received: 08/26/2016

Laboratory ID:RH26003-003

Matrix: Solid

% Solids: 83.8 08/26/2016 2125

Run	Prep Method	Cleanup Analy	ytical Method	Dilution	Analysis Date Analyst	Prep Date Batch	
1	3546	3660B/3665A	8082A	50	09/07/2016 0930 MEM	09/02/2016 1100 21229	

Parameter		CA Numb	살님 : 150 전 얼마 됐는데 되어왔다.	Result Q	PQL	Units	Run
Araclor 1016		12674-11	2 8082A	ND	590	ug/kg	1
Aroclor 1221		11104-28	2 8082A	ND	590	ug/kg	1
Aroclor 1232		11141-16	5 B082A	ND	590	ug/kg	1
Arodor 1242		53469-21-	9 8082A	ND	590	ug/kg	1
Aroclor 1248		12672-29-	6 8082A	2100	590	ug/kg	1
Aroclor 1254		11097-69-	1 8082A	5300	590	uglkg	1
Aroclor 1260		11096-82-	5 8082A	ND	590	ug/kg	1
Surrogate	Q	Run 1 Ac % Recovery	ceptance Limits				
Decachlorobiphenyl		106	41-132				
Tetrachloro-m-xylene		95	35-100				

POL = Practical quantitation limit

B = Detected in the method blank

E = Quantitution of compound exceeded the calibration range H = Out of holding time

. Not detected at or above the PQL

J = Estimated result < PQL and ≥ MDL

P - The RPD between two GC columns exceeds 40%

N = Recovery Is out of criteria

, a applicable, all soil sample analysis are reported on a dry weight basis unloss flagged with a 'W'  $^{\bullet}$ 



September 16, 2016

(b)(6) Personal

101 Tavern Branch Drive Chesterfield, SC 29709

Dear (b)(6)

Thank you for allowing the Department to collect soil samples in your yard. During the week of August 22, 2016, we collected samples of the soil near the drainage ditch in your backyard. The samples were collected from ground surface to a depth of 2". The samples were tested to determine the levels of polychlorinated biphenyls (PCBs), historically-used pesticides, and other contaminants that may be in the soil. The attached sheet includes additional information about PCBs.

The table below contains the results of the samples taken on your property. The screening value for PCBs is 1,000 micrograms/kilogram (ug/kg). We use screening values to determine where additional evaluation is needed. Sample locations with PCB results above 1,000 ug/kg require further investigation. Some samples taken on your property also revealed the presence of historically-used pesticides.

Sample ID	Contaminant	Sample Result (ug/kg)
BL-SS-48	Total PCBs	1,080,000
BL-SS-48A	Total PCBs	12,800
BL-SS-48B	Total PCBs	10,800

Based on the results, DHEC has determined that additional sampling is needed to determine the extent of this contamination. We will be in your area the week of September 19, 2016, to collect additional samples and distribute information.

Additional information will be shared with you as we continue to investigate this area. As a precautionary measure, DHEC recommends the following safeguards for your family:

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- When mowing the lawn, avoid running the mower over patches of dirt or wet down dirt areas prior to mowing. Avoid mowing the area next to the drainage ditch.

Until we confirm that the levels of PCBs in the soil are below the screening level, DHEC recommends that you avoid the area near the drainage ditch in your backyard and minimize the amount of dust and dirt entering your home.

If you have any questions regarding the attached map or information, please give me a call at (803) 898-0816.

Sincerely,

Judy Canova, Project Manager State Remediation Section

Cc: Buck Graham

Donna Moye

File



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### Where are PCBs found today?

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## How can PCBs harm me and my family?

In this situation of historical contamination, PCBs are primarily a hazard through skin contact. The precautions found on the other side of this page are ways you can reduce your potential for exposure to these chemicals. The most common health effects from exposure to PCBs is from workplace exposure (mostly historical) to the liquid oils through contact with the skin. PCBs are associated with skin rashes and a specific type of acne. Workplace exposures have also been associated with changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects.

### Where can I find more information about PCBs?

For additional information about PCBs, potential health effects, clean-up and disposal of waste, please visit the U. S. Environmental Protection Agency's website at <a href="https://www.epa.gov/PCBs">www.epa.gov/PCBs</a>.

If you would like additional information about the hazards of PCB's, please refer to the full ToxFAQ sheet produced by the Centers for Disease Control and Prevention's Agency for Toxic Substances and Disease Registry located: <a href="http://www.atsdr.cdc.gov/toxfaqs/tfacts17.pdf">http://www.atsdr.cdc.gov/toxfaqs/tfacts17.pdf</a>

Client:synTerra

Description: BL-SS-48

Laboratory ID: RH26003-018

Matrix: Solid

% Solids: 92.9 08/26/2016 2125

Date Sampled:08/24/2016 1648

Date Received: 08/26/2016

Run Prep Method Cleanup Analytical Method Dilution Analysis Date Analyst Prep Date Batch 1 3546 3660B/3665A 8082A 09/02/2046 1502 MEM 08/31/2016 2206 21111 2000

Parameter		CAS Number	Analytical Method	Rosult Q	PQL		Units	Run
Aroclor 1016		12674-11-2	8082A	ND	21000		ug/kg	1
Aroclor 1221		11104-28-2	8082A	ND	21000		ug/kg	7
Arodor 1232		11141-16-5	8082A	ND	21000		ug/kg	1
Aroclor 1242		53469-21-9	80B2A	ND	21000		ug/kg	1
Aroclor 1248		12672-29-6	8082A	490000	21000		ug/kg	1
Aroclor 1254		11097-69-1	8082A	590000	21000		ug/kg	1
Aroclor 1260		11096-82-5	8082A	ND	21000	4.	ug/kg	1

Acceptance Limits Run 1 Surrogate % Recovery Decachforobiphenyl 524 41-132 Tetrachloro-m-xylene 35-106 71

""L = Practical quantization first

B = Delected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

= Not detected at or above the POL

J = Estimated result < POI, and ≥ MDL P = The RPD between two GC columns exceeds 40%

N = Kecovery is out of cateria

vytere applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a 'W'

Client:synTerra

Description: BL-SS-48A

Date Sampled:08/25/2016 1000

Date Received: 08/26/2016

Tetrachloro-m-xylene

Laboratory ID: RH26003-002

Matrix: Solid

% Solids: 85.4 08/26/2016 2125

Run	Prep Method	Cleanup	Analytical Method	Dilution	Analysis Date Analysis	Prop Date B	Batch
1	3546	3660B/3665/	8082A	50	09/06/2016 1320 MEM	09/02/2016 1100 2	1229

Parameter	, CAS Number	Analytical Method	Result Q	PQL	Units	Run
Aroclor 1016	12674-11-2	8082A	ND	560	ug/kg	1
Aroclor 1221	11104-28-2	8082A	ND	560	ug/kg	1
Aroclor 1232	11141-16-5	8082A	ND	560	ug/kg	1
Aroclor 1242	53469-21-9	8082A	ND	560	ug/kg	1
Aroclor 124B	12672-29-8	8082A	4900	560	ug/kg	1
Aroclor 1254	11097-69-1	8082A	7900	560	ug/kg	1
Aroclor 1260	11096-82-5	8082A	ND	560	ug/kg	1
Surrogate	Run 1 Accept Q % Recovery Lim			8 8		
Decachloroblohenvi	129 41-1	32				

35-106

93

PQL = Practical quantitation finit

B = Detected in the method blank

E = Quantitation of compound excended the calibration range 11 = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery Is out of criteria

Client:synTerra

Description: BL-SS-48B

Date Sampled:08/25/2016 1004

Date Received: 08/26/2016

Laboratory ID: RH26003-005

Matrix: Solld

% Solids: 90.9 08/26/2016 2125

 Run
 Prep Method
 Gleanup
 Analytical Method
 Dilution
 Analysis Date
 Analysis
 Prep Date
 Batch

 1
 3546
 3680B/3665A
 8082A
 50
 09/07/2016 0956 MEM
 09/02/2016 1100 21229

Parameter	CAS Number	Analytical Method	Result	Q	:	PQL	- Units	Run
Arcclor 1016	12674-11-2	8082A	ND	-		540	ug/kg	1
Aroclor 1221	11104-28-2	8082A	ND			540	ug/kg	1
Arodor 1232	11141-16-5	8082A	ND			540	ug/kg	1
Arodor 1242	53469-21-9	8082A	ND			540	ug/kg	1
Aroclor 1248	12672-29-6	8082A	4100			540	ug/kg	1
Aroclor 1254	11097-69-1	8082A	6700			540	ug/kg	1
Aroclor 1260	11096-82-5	8082A	ND			540	ug/kg	1

 Surrogate
 Q
 Run 1 Recovery
 Acceptance Limits

 Decachlorobiphenyl
 122
 41-132

 Tetrachloro-m-xylone
 103
 35-106

~3L = Practical quantilation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the satisfation range

H = Out of holding time

· Not detected at or allove the PQL.

J = Entimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

# Semivolatile Organic Compounds by GC/MS

Client:synTerra

Description: BL-SS-48

Date Sampled:08/24/2016 1648

Date Received: 08/26/2016

Laboratory ID: RH26003-018

Matrix: Solid

% Solids: 92.9 08/26/2016 2125

Run Prep Method Analytical Method Dilution Analysis Date Analyst Prep Date Batch 3550C 09/02/2016 1655 JCG 08/29/2016 2356 20899 8270D

Parameter	CAS Number	Analytical Method	Result Q	PQL	Units	Rur
Acenaplithene	83-32-9	6270D	ND	350	ug/kg	1
Acenaphthylone	208-96-8	8270D	ND	350	ug/kg	1
Acetophenona	98-86-2	8270D	ND	350	ug/kg	1
Anthracene	120-12-7	8270D	ND	350	ug/kg	1
Atrazine	1912-24-9	82700	ND	350	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND	088	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND	350	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND	350	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND .	350	ug/kg	1
Benzo(g,h,i)porylene	191-24-2	8270D	ND	350	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND -	350	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND	350	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND	350	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND	350	ug/kg	1
Caprolactam	105-60-2	8270D	ND	880	ug/kg	1
Carbazole	86-74-8	B270D	ND	350	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND	350	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND	350	ug/kg	1
bls(2-Chloroethoxy)methane	111-91-1	8270D	ND	350	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND	350	ug/kg	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	B270D	ND	350	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND	350	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND	350	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	B270D	ND	350	ug/kg	1
Chrysene	218-01-9	8270D	ND	350	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND	350	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND	350	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND	350	ug/kg	. 1
Dibenzofuran	132-64-9	8270D	, ND	350	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND	880	ug/kg	1
2,4-Dichlerophenol	120-83-2	8270D	ND	350	ug/kg	1
Diathylphthalate	84-66-2	82700	ND	350	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND	350	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND	350	ug/kg	4
6-Dinitro-2-methylphenol	534-52-1	8270D	ND	880	ug/kg	1
4-Dinitrophenol	51-28-5	8270D	ND	880	ug/kg	1
,4-Dinitrotoluene	121-14-2	8270D	ND	350	ug/kg	1
,6-Dinitrotoluene	606-20-2	8270D	ND	350	ug/kg	1
is(2-Ethylhexyl)phthalate	117-81-7	8270D	ND	350	ug/kg	1
luoranthene	206-44-D	8270D	ND	350	ug/kg	3
luorene	86-73-7	8270D	ND	350	ug/kg	1
exachlorobenzene	118-74-1	8270D	ND	350	ug/kg	1
exachlorobutadiene	87-68-3	8270D	ND	350	ug/kg	1
exachloro cyclopentadiene	77-47-4	8270D	ND	880	ug/kg	1

PQL = Prestical quantitation finit

B = Detected in the method blank

ND = Not detected at or above the PQL Where applicable, n'i seil sample analysis are reported on a dry weight basis unless flegged with a "W"

J = Estimated result < PCL and > MDL P = The RPD between two GC columns exceeds 40%

N = Rocovery is out of criter's

Shealy Environmental Services, Inc.

106 Vanlage Point Drive West Columbia, SC 20172 (803) 701-0700 Fex (803) 791-9111 www.shoolylab.com

E = Quantitation of compound exceeded the calibration range H = Dut of holding time

## Semivolatile Organic Compounds by GC/MS

Client: synTerra

Description: BL-SS-48

Date Sampled: 08/24/2016 1648

Date Received: 08/26/2016

Laboratory ID: RH26003-018

Matrix: Solid

% Solids: 92.9 08/26/2016 2125

Run Prep Method 1 3550C

2,4,6-Trichlorophenol

Analytical Method Dilution 8270D

Analysis Dato Analyst 09/02/2016 1656 JCG

Prep Date 08/29/2016 2358 20899

ND

8270D

CAS Analytical PQL Units Parameter Result Q Run Number Method Hexachloroethane . 67-72-1 8270D ND 350 ug/kg 1 Indeno(1,2,3-c,d)pyrene 193-39-5 8270D ND 350 ug/kg 1 78-59-1 8270D ND 350 ug/kg Isophorone 2-Methylnaphthalene 91-57-6 8270D ND 350 ug/kg 2-Methylphenol 95-48-7 8270D ND 350 ug/kg 105-44-5 3+4-Methylphenol 8270D ND 710 ug/kg 1 621-64-7 8270D ND 350 1 N-Nitrosodi-n-propytamine ug/kg 86-30-6 8270D ND 350 1 N-Nitrosodiphenylamine (Diphenylamine) ug/kg 91-20-3 8270D ND 350 Naphthalene ug/kg 1 88-74-4 ND 350 2-Nitroaniline 8270D ug/kg 1 99-09-2 8270D ND' 350 3-Nitroaniilne ug/kg 1 4-Nitroaniline 100-01-6 8270D ND 350 ug/kg 1 98-95-3 8270D ND 350 Nitrobenzene ug/kg 1 ND 350 88-75-5 8270D 2-Nitrophenol ug/kg 1 ND 100-02-7 8270D 880 4-Nitrophenol ug/kg 1 ND Pentachlorophenol B7-86-5 8270D 880 ug/kg 1 Phenanthrene 85-01-8 8270D ND 350 ug/kg 1 Phenol 108-95-2 8270D ND 350 ug/kg 1 Pyrene 129-00-0 B270D ND 350 ug/kg 1 ND 2,4,5-Trichlorophenol 95-95-4 8270D 350 ug/kg 1

88-06-2

Surrogate		Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol	4	4.11	73	30-117
2-Fluorobiphenyl			64	33-102
2-Fluorophenol			59	28-104
Nitrobenzene-d5			62	22-109
Phenol-d5			65	27-103
Terphenyl-d14			87	41-120

I. = Practical quantifation fimit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

350

= Not detected at or above the PQL

J = Estimated result < PQL and > MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

ug/kg

# Organochlorine Pesticides by GC

Cllent synTerra

Description: BL-SS-43

Date Received: 08/26/2016

Date Sanipled:08/24/2016 1648

Laboratory ID: RH26003-018

Matrix: Solid

% Solids: 92.9 08/26/2016 2125

Run	Prep Method	Analytical Method	Dilution	Analysis Date Anal	yst Prep Date	Batch
1	3546	6081B	1000	09/02/2016 1113 PM	S 08/31/2016 2206	21110

				Analytical	-	T 11 Table				
Paramoter		N	umber	Method	Result	Q	PQL		Units	Run
Aldrin		30	9-00-2	80818	· ND		1000		ug/kg	1
gamma-BHC (Lindane)		5	8-89-9	8081B	ND		1000		ug/kg	1
alpha-BHC		31	9-84-6	8081B	ND		1000	7	ug/kg	1
beta-BHC		31	9-85-7	8081B	ND		1000		ug/kg	1
delta-BHC		31	9-86-8	8081B	ND		1000		ug/kg	1
Chlordane		. 5	7-74-9	8081B	ND		2100		ug/kg	1
cis-Chlordane		510	3-71-9	8081B	ND		1000		ug/kg	1
trans-Chlordano		510	3-74-2	8081B	14000		1000	9	ug/kg	1
4.4'-DDD		7	2-54-8	8081B	ND		1000		ug/kg	1
4,4'-DDE		7	2-55-9	8081B	9300	P	1000		ug/kg	7
4,4'-DDT -		5	0-29-3	8081B	15000		1000	t	ıg/kg	1
Dieldrin		6	0-57-1	8081B	28000		1000	ı	ıg/kg	1
Endosulfan I		959	9-98-8	8081B	2500	P	1000	t	ıg/kg	1
Endosulfan II		33213	3-65-9	8081B	4400	P	1000	ı	ig/kg	1
Endosulfan sulfate		1031	1-07-8	8081B	ND		1000	9	ug/kg	1
Endrin		72	2-20-8	8081B	3100	P	1000	t	g/kg	1
Endrin aldehydo		7421	-93-4	8081B	2800		1000	U	g/kg	1
Endrin ketone		53494	-70-5	8081B	ND		1000	ı	ug/kg	7
Heptachlor		76	44-8	8081B	ND		1000	3	ıg/kg	1
Heptachlor epoxide		1024	-57-3	8081B	1200	P	1000	u	g/kg	1
Methoxychlor		72	-43-5	8081B	ND		4200	ι	g/kg	1
Toxaphene		8001	-35-2	8081B	ND		10000	L	ig/kg ·	1
Surrogate	Q	Run 1 % Recovery	Acceptance Limits							
Decachlorobiphenyl	N	0.00	57-110							1
fetrachloro-m-xylene	N	0.00	37-91							

**************************************	Run 1 Acceptance				
Surrogate	Q	% Recovery	Limits		
Decachlorobiphenyl	N	0.00	57-110		
Tetrachloro-m-xylene	N	0.00	37-91		

PQL = Practical quantitation fimil

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range H = Cut of holding time

ND = Not detected at or above the PQL

J = Estimate-firesult < POL and  $\geq MDL$  P = The RPD between two GC columns exceeds 40%

N = Recovery is out of oftenta

Whate applicable, all sall sample analysis are reported on a dry weight basis unless flagged with a "W"

## TAL Metals

Client: synTerra

Description: BL-SS-48

Date Sampled:08/24/2016 1648

Date Received: 08/26/2016

Laboratory ID: RH26003-018

Matrix: Solid .

% Solids: 92.9 08/26/2016 2125

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7471B	7471B	1	08/30/2016 1350	CLM	08/29/2016 0936	20870
1	3050B	6010C	1	09/03/2015 1432	CJZ	08/31/2016 1101	21039
2	3050B	6010C	1	09/07/2016 1301	CJZ	08/31/2016 1101	21039

Parameter		CAS Number	Analytical Method	Result Q	PQI.	Units	Run
Aluminum		7429-90-5	6010C	6300	15	mg/kg	2
Antimony		7440-36-0	6010C	ND	0.77	mg/kg	1
Arsenic		7440-38-2	6010C	2.1	0.58	mg/kg	1
Barium		7440-39-3	6010C	25	1.0	mg/kg	2
Beryllium		7440-41-7	601DC	ND	0.19	mg/kg	2
Cadmium		7440-43-9	6010C	ND	0.19	mg/kg	1
Calcium		7440-70-2	6010C	280	190	mg/kg	1
Chromium		7440-47-3	6010C	11	0.39	mg/kg	1
Cobalt	4	7440-48-4	601DC	ND	1.0	mg/kg	1
Copper		7440-50-8	6010C	12	0.39	mg/kg	1
Iron	,	7439-89-6	6010C	4900	3.9	mg/kg	2
Lead	0.55	7439-92-1	6010C	18	0.39	mg/kg	1
Magnesium		7439-95-4	6010C	ND	190	mg/kg	1
Manganese		7439-96-5	6010C	43	0.58	mg/kg	1
Mercury *		7439-97-6	7471B	ND	0.087	mg/kg	1
Nickel		7440-02-0	6010C	2.1	1.5	mg/kg	1
Potassium		7440-09-7	6010C	ND	190	mg/kg	2
Selenium	2	7782-49-2	6010C	ND	0.77	mg/kg	1
Silver		7440-22-4	6010C	ND	0.39	mg/kg	1
Sodium		7440-23-5	6010C	ND	190	mg/kg	2
Thallum		7440-28-0	6010C	ND	- 1.9	mg/kg	1
/anadium		7440-62-2	6010C	13	1.9	mg/kg	1
linc	Ni .	7440-66-6	6010C	31	1.9	mg/kg	1

TL = Practical quantitation limit

B = Detected in the moth od blank

E = Quantitation of compound exceeded the calibration range H = Out of holding time

<sup>-</sup> Not detected at or above the PQL

 $J = Extimated result < POL and <math>\geq MDL$ 

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



September 16, 2016

(b)(6) Personal T12 Lake Drive Cheraw, SC 29520

Dear (b)(6)

Thank you for allowing the Department to collect soil samples in your yard. During the week of August 22, 2016, we collected samples of the soil near the drainage ditch in your backyard. The samples were collected from ground surface to a depth of 2". The samples were tested to determine the levels of polychlorinated biphenyls (PCBs) that may be in the soil.

The table below contains the results of the samples taken on your property. The screening value for PCBs is 1,000 micrograms/kilogram (ug/kg). We use screening values to determine where additional evaluation is needed. Sample locations with PCB results above 1,000 ug/kg require further investigation.

Sample ID	Contaminant	Sample Result (ppm)
BL-SS-73	Total PCBs	2.4

Based on the results, DHEC has determined that additional sampling is needed to determine the extent of this contamination. We will be in your area the week of September 19, 2016, to collect additional samples and distribute information.

Additional information will be shared with you as we continue to investigate this area. As a precantionary measure, DHEC recommends the following safeguards for your family:

- Stay out of the drainage ditch and do not let children or animals play in your backyard near the drainage ditch
- Wash your hands before eating, sleeping or caring for children
- Wash your hands after playing or working in the yard
- Don't let children eat dirt
- Limit the amount of dust entering your home by using a doormat to wipe feet before entering
- Wipe off window sills, table tops and other surfaces that children can reach or that are used for eating
- When moving the lawn, avoid running the mower over patches of dirt or wet down dirt areas prior to moving. Avoid moving the area next to the drainage ditch.

Until we confirm that the levels of PCBs in the soil are below the screening level, DHEC recommends that you avoid the area near the drainage ditch in your backyard and minimize the amount of dust and dirt entering your home.

If you have any questions regarding the attached map or information, please give me a call at (803) 898-0816.

Sincerely,

Judy Canova, Project Manager State Remediation Section

Cc:

Buck Graham Donna Moye

File



#### FORMER BURLINGTON INDUSTRIES SITE

The South Carolina Department of Health and Environmental Control (SC DHEC) is conducting soil and sediment sampling in your community. We have found contamination that is very likely the result of historical practices of waste removal from industrial processes prior to the existence of environmental regulations. This DHEC investigation is attempting to determine who may have been responsible for the contamination as well as the best way to address it and develop a clean-up plan.

We have the results of a first round of sampling and are in the process of collecting additional samples so that we can better understand the locations affected. Preliminary data has found elevated concentrations of polychlorinated biphenyls (PCBs) as well as some pesticides that are above the EPA's Residential Regional Screening Levels between Pecan Drive and the former Burlington Industries facility. We use screening values to determine if or where additional evaluation is needed.

When we are investigating areas of historical environmental contamination, we make recommendations to citizens about things that you can do to prevent potential future exposure(s). As a precautionary measure, if you live along the side of Pecan Drive or Robinhood Drive that backs up to the ditch, DHEC recommends the following safeguards for your family:

- Do not walk in the drainage ditch behind the houses on Pecan Drive and the houses on Robinhood Drive or let children or pets play in back yards near the drainage ditch.
- · Wash your hands before eating or sleeping, or caring for children.
- · Wash your hands after playing or working in the yard.
- Don't let children eat dirt.
- Limit the amount of dust entering your home by using a doormat to wipe feet before entering.
- When moving the lawn, avoid running the mover over patches of dirt or, alternatively, wet down dirt areas prior to moving. Avoid moving the area next to the drainage ditch.

DHEC is still in the investigation phase and will be conducting additional sampling in your area the week of September 19<sup>th</sup>, 2016. Additional information will be shared with you as we continue our investigation. Once we have the results of this next round of sampling, a community meeting will be scheduled to discuss the results as well as the next steps. If your yard has been sampled or is sampled in the future, you will receive the results as soon as they are available.

### Polychlorinated Biphenyls (PCBs) Information Sheet

#### What are PCB's?

PCB stands for polychlorinated biphenyls. This is not one chemical, but a class made up of 209 chemicals. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. PCBs have no known taste or smell. PCBs were used in manufacturing processes from 1929 until they were banned in 1979.

#### How were PCBs used?

Historically, PCBs were used as coolants and lubricants in transformers, capacitors and other electrical equipment because they are good insulators and don't burn. PCBs were also historically used as fluids in old florescent lighting fixtures and electrical transformers, as well as in products like cutting oils, hydraulic oils, and carbonless copy paper.

In 1979, the United States banned the manufacture of PCBs because they were found to be harmful to people and the environment. However, once PCBs are in the environment, they do not break down easily and may remain where they were released for very long periods of time.

### Where are PCBs found today?

Because PCBs were used for so long prior to being regulated, low levels are found throughout the environment; typically in soils and in sediments in streams, rivers or ponds. They are sometimes found at higher levels in areas where they were disposed of prior to environmental regulations or where they have been illegally dumped.

#### How can PCBs harm me and my family?

In this situation of historical contamination, PCBs are primarily a hazard through skin contact. The precautions found on the other side of this page are ways you can reduce your potential for exposure to these chemicals. The most common health effects from exposure to PCBs is from workplace exposure (mostly historical) to the liquid oils through contact with the skin. PCBs are associated with skin rashes and a specific type of acne. Workplace exposures have also been associated with changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects.

### Where can I find more information about PCBs?

For additional information about PCBs, potential health effects, clean-up and disposal of waste, please visit the U. S. Environmental Protection Agency's website at <a href="https://www.epa.gov/PCBs">www.epa.gov/PCBs</a>.

If you would like additional information about the hazards of PCB's, please refer to the full ToxFAQ sheet produced by the Centers for Disease Control and Prevention's Agency for Toxic Substances and Disease Registry located: <a href="http://www.atsdr.cdc.gov/toxfags/tfacts17.pdf">http://www.atsdr.cdc.gov/toxfags/tfacts17.pdf</a>

Clent:synTerra

Description: BL-SS-73

Date Sampled:08/25/2016 1120

Date Received: 08/25/2016

Laboratory ID:RH26063-008

Matrix: Solld

% Solids: 86.4 08/26/2016 2125

Run	Prep Method	Cleanup	Analytical Method	Dilution	Analysis Date Analyst	Prep Date	Batch
1	3546	3660B/3665A	8082A	10	09/02/2016 2152 MEM	09/02/2016 11	00 21229

Parameter	CAS Number	Analytical Method	Result Q	PQL	Units	Run
Arador 1016	12674-11-2	8082A	ND	110	ug/kg	1
Aroclor 1221	11104-28-2	8082A	ND	110	ug/kg	1
Arador 1232	11141-16-5	8082A	ND	110	ug/kg	1
Aroclor 1242	53469-21-9	8082A	ND	110	ug/kg	1
Aroclor 1248	12672-29-6	8082A	ND	110	ug/kg	1
Aroclor 1254	11097-69-1	8082A	2400	110	ug/kg	1
Aroclor 1260	11096-82-5	8082A	ND	110	ug/kg	1

Surrogate	*	Q	% Recovery	Limits
Decachiorobiphenyl			61	41-132
Tetrachloro-m-xylene			64	35-106

FQL= Practical quantitation limit

B = Dotacted in the method blank

E = Quantitation of compound exceeded the calibration range H = Out of helding time

" - Not coincled at or above the PQL

J = Estimated result < FQL and ≥ MDL P = The RPD between two GC columns exceeds 45%

N = Recovery is out of criteria

re applicable, oil soil nample analysis are reported on a dry weight basis unless flagged with a "W"



September 16, 2016

(b)(6) Personal

601 Robin Hood Drive Cheraw, SC 29520

Dear(b)(6)

Thank you for allowing the Department to collect soil samples in your yard. During the week of August 22, 2016, we collected samples of the soil near the drainage ditch in your backyard. The samples were collected from ground surface to a depth of 2". The samples were tested to determine the levels of polychlorinated biphenyls (PCBs), historically-used pesticides, and other contaminants that may be in the soil. The attached sheet includes additional information about PCBs.

The table below contains the results of the samples taken on your property. The screening value for PCBs is 1,000 micrograms/kilogram (ug/kg). We use screening values to determine where additional evaluation is needed. Sample locations with PCB results above 1,000 ug/kg require further investigation. Some samples taken on your property also revealed the presence of historically-used pesticides.

Sample ID	Contaminant	Sample Result (ug/kg)
BL-SS-57	Total PCBs	8,200
BL-SS-58	Total PCBs	19,400
BL-SS-59	Total PCBs	330
BL-SS-67	Total PCBs	3,900

Based on the results, DHEC has determined that additional sampling is needed to determine the extent of this contamination. We will be in your area the week of September 19, 2016, to collect additional samples and distribute information.

Additional information will be shared with you as we continue to investigate this area. As a precautionary measure, DHEC recommends the following safeguards for your family:

- Stay out of the drainage ditch and do not let children or animals play in your backyard near the drainage ditch
- · Wash your hands before eating, sleeping or caring for children
- · Wash your hands after playing or working in the yard
- · Don't let children eat dirt

- Limit the amount of dust entering your home by using a doormat to wipe feet before entering
- Wipe off window sills, table tops and other surfaces that children can reach or that are used for eating
- When moving the lawn, avoid running the mover over patches of dirt or wet down dirt areas prior to moving. Avoid moving the area next to the drainage ditch.

Until we confirm that the levels of PCBs in the soil are below the screening level, DHEC recommends that you avoid the area near the drainage ditch in your backyard and minimize the amount of dust and dirt entering your home.

If you have any questions regarding the attached map or information, please give me a call at (803) 898-0816.

Sincerely,

Judy Canova, Project Manager State Remediation Section

Cc:

Buck Graham Donna Moye

File



#### FORMER BURLINGTON INDUSTRIES SITE

The South Carolina Department of Health and Environmental Control (SC DHEC) is conducting soil and sediment sampling in your community. We have found contamination that is very likely the result of historical practices of waste removal from industrial processes prior to the existence of environmental regulations. This DHEC investigation is attempting to determine who may have been responsible for the contamination as well as the best way to address it and develop a clean-up plan.

We have the results of a first round of sampling and are in the process of collecting additional samples so that we can better understand the locations affected. Preliminary data has found elevated concentrations of polychlorinated biphenyls (PCBs) as well as some pesticides that are above the EPA's Residential Regional Screening Levels between Pecan Drive and the former Burlington Industries facility. We use screening values to determine if or where additional evaluation is needed.

When we are investigating areas of historical environmental contamination, we make recommendations to citizens about things that you can do to prevent potential future exposure(s). As a precautionary measure, if you live along the side of Pecan Drive or Robinhood Drive that backs up to the ditch, DHEC recommends the following safeguards for your family:

- Do not walk in the drainage ditch behind the houses on Pecan Drive and the houses on Robinhood Drive or let children or pets play in back yards near the drainage ditch.
- · Wash your hands before eating or sleeping, or caring for children.
- · Wash your hands after playing or working in the yard.
- Don't let children eat dirt.
- Limit the amount of dust entering your home by using a doormat to wipe feet before entering.
- When mowing the lawn, avoid running the mower over patches of dirt or, alternatively, wet down dirt areas prior to mowing. Avoid mowing the area next to the drainage ditch.

DHEC is still in the investigation phase and will be conducting additional sampling in your area the week of September 19<sup>th</sup>, 2016. Additional information will be shared with you as we continue our investigation. Once we have the results of this next round of sampling, a community meeting will be scheduled to discuss the results as well as the next steps. If your yard has been sampled or is sampled in the future, you will receive the results as soon as they are available.

### Polychlorinated Biphenyls (PCBs) Information Sheet

#### What are PCB's?

PCB stands for polychlorinated biphenyls. This is not one chemical, but a class made up of 209 chemicals. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. PCBs have no known taste or smell. PCBs were used in manufacturing processes from 1929 until they were banned in 1979.

#### How were PCBs used?

Historically, PCBs were used as coolants and lubricants in transformers, capacitors and other electrical equipment because they are good insulators and don't burn. PCBs were also historically used as fluids in old florescent lighting fixtures and electrical transformers, as well as in products like cutting oils, hydraulic oils, and carbonless copy paper.

In 1979, the United States banned the manufacture of PCBs because they were found to be harmful to people and the environment. However, once PCBs are in the environment, they do not break down easily and may remain where they were released for very long periods of time.

## Where are PCBs found today?

Because PCBs were used for so long prior to being regulated, low levels are found throughout the environment; typically in soils and in sediments in streams, rivers or ponds. They are sometimes found at higher levels in areas where they were disposed of prior to environmental regulations or where they have been illegally dumped.

### How can PCBs harm me and my family?

In this situation of historical contamination, PCBs are primarily a hazard through skin contact. The precautions found on the other side of this page are ways you can reduce your potential for exposure to these chemicals. The most common health effects from exposure to PCBs is from workplace exposure (mostly historical) to the liquid oils through contact with the skin. PCBs are associated with skin rashes and a specific type of acne. Workplace exposures have also been associated with changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects.

#### Where can I find more information about PCBs?

For additional information about PCBs, potential health effects, clean-up and disposal of waste, please visit the U. S. Environmental Protection Agency's website at <a href="https://www.epa.gov/PCBs">www.epa.gov/PCBs</a>.

If you would like additional information about the hazards of PCB's, please refer to the full ToxFAQ sheet produced by the Centers for Disease Control and Prevention's Agency for Toxic Substances and Disease Registry located: http://www.atsdr.cdc.gov/toxfaqs/tfacts17.pdf

Client: synTerra

Description: BL-SS-57

Date Sampled:08/25/2016 1053

Date Received: 08/26/2016

Tetrachloro-m-xylene

Laboratory ID: RH26003-020

Matrix: Solid

% Solids: 80.6 08/26/2016 2125

Run	Prep Method	Cleanup A	nalytical Method	Dilution	Analysis Date Ar	nalyst	Prep Date	Batch
1	3546	3660B/3665A	8082A	20	09/02/2016 1515 1	MEM	08/31/2016 2206	21111

77

Parameter		CAS Number	Analytica! Method	Result Q	PQL	Units	Rur
Aroclor 1016		12674-11-2	8082A	ND	240	ug/kg	1 1
Aroclor 1221		11104-28-2	8082A	ND	240	ug/kg	1
Aroclor 1232		11141-16-5	8082A	ND	240	ug/kg	1
Aroclor 1242		53469-21-9	8082A	ND	240	ug/kg	1
Aroclor 1248		12672-29-6	8082A	4500	240	ug/kg	1
Aroclor 1254	*	11097-69-1	8082A	3700	240	ug/kg	1
Arodor 1260		11096-82-5	8082A	ND	240	ug/kg	1
Surrogate	Q	Run 1 Accept % Recovery Lin					
Decachlorobiphenyl		86 41-1	32 .			500	

35-106

POL\* Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range H = Out of holding time

MD = Not detected at or above the PQL

 $J = Es9maled rest R \leq POI, and <math>\geq MDI$ ,

P ≈ The RPD between two GC columns exceeds 40%

N = Recovery is out of criticals

we applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client:synTerra

Description: BL-SS-58

Date Sampled 08/25/2016 1550

Date Received: 08/25/2016

Laboratory ID: RH26003-004

Matrix: Solid

% Solids: 92.3 08/26/2016 2125

Run	Prep Method	Cleanup	Analytical Method	Dilution	Analysis Date Analyst	Prep Date	Batch
1	3546	3660B/3665A	8082A	50	09/07/2016 0943 MEM	09/02/2016 1100	21229

	CAS Number	Analytical Method	Result	Q PQL	Units	Run
	12674-11-2	8082A	ND	530	ug/kg	1
	11104-28-2	8082A	ND	530	ug/kg	1
	11141-16-5	8082A	ND	530	ug/kg	1
	53469-21-9	8082A	ND	530	· ug/kg	1
	12672-29-6	8082A	12000	530	ug/kg	1
Vist.	11097-69-1	8082A	7400	530	ug/kg	1
	11096-82-5	8082A	ND	530	ug/kg	1
	Ru	Number 12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5 Run 1 Accepta	Number Method 12674-11-2 8082A 11104-28-2 8082A 11141-16-5 8082A 53469-21-9 8082A 12672-29-6 8082A 11097-69-1 8082A 11096-82-5 8082A Run 1 Acceptance	Number         Method         Result           12674-11-2         8082A         ND           11104-28-2         8082A         ND           11141-16-5         8082A         ND           53469-21-9         8082A         ND           12672-29-6         8082A         12000           11097-69-1         8082A         7400           11096-82-5         8082A         ND	Number         Method         Result Q         PQL           12674-11-2         8082A         ND         530           11104-28-2         8082A         ND         530           11141-16-5         8082A         ND         530           53469-21-9         8082A         ND         530           12672-29-6         8082A         12000         530           11097-69-1         8082A         7400         530           11096-82-5         8082A         ND         530           Run 1         Acceptance         Acceptance         8082A         ND         530	Number         Method         Result Q         PQL         Units           12674-11-2         8082A         ND         530         ug/kg           11104-28-2         8082A         ND         530         ug/kg           11141-16-5         8082A         ND         530         ug/kg           53469-21-9         8082A         ND         530         ug/kg           12672-29-6         8082A         12000         530         ug/kg           11097-69-1         8082A         7400         530         ug/kg           11096-82-5         8082A         ND         530         ug/kg           Run 1         Acceptance         Acceptance         8000 </td

Decachlorobiphenyl 41-132 Telrachloro-m-xylene 98 35-106

PGL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range H = Out of holding time

ND = Not detected at or above the PQL  $J = \text{Estimated result} < \text{PQL and} \ge \text{MDL}$ Where applicable, o'll roll sample analysis are reported on a dry weight bests unless flagged with a "W"

P = The RPD between two GC columns exceeds 40% N - Recovery is out of criteria

Client:synTerra

Description: BL-SS-59

Date Sampled:08/24/2016 1545

Date Received: 08/26/2016

Laboratory ID:RH26003-011

Matrix; Solld

% Solids: 96.6 08/26/2016 2125

Run	Prep Method	Cleanup	Analy	tical Method	·Dilution	Analysis Date	Analyst	Prop Date	Batch
1	3546	3660B/3665A		8082A	1	09/06/2016 1307	MEM	09/02/2016 1100	21229

Parameter			N	CAS lumber	Analytical Method	Result	Q	PQL	Units	Run
Arcclor 1016	*		1267	4-11-2	8082A	ND		9.5	ug/kg	1
Aroclor 1221			1110	14-23-2	8082A	ND		9.5	ug/kg	1
Aroclor 1232			1114	1-16-5	8082A	ND		9.5	ug/kg	1
Aroclor 1242			5346	9-21-9	8082A	ND		9.5	ug/kg	1
Aroclor 1248			1267	2-29-6	8082A	ND		9.5	ug/kg	1
Aroclor 1254			1109	7-69-1	8082A	33		9.5	ug/kg	1
Araclor 1260			1109	6-82-5	8082A	ND		9.5	ug/kg	1
Surrogate		Q	Run 1 % Recover	Accepta y Limi		*				
Decachlorobiphenyl			75	41-13	2					
Tetrachloro-m-xylene			77	35-10	5					

Client:synTerra

Description: BL-SS-67

Laboratory ID: RH26003-024

Matrix: Solid

Date Sampled:08/24/2016 1336

% Solids: 86.2 08/26/2016 2125

Date Received: 08/26/2016

Cleanup Analytical Method Dilution Analysis Date Analyst Run Prep Method Prep Date Batch 3546 3660B/3565A 09/01/2016 2120 MEM 08/31/2016 2206 21111 A2808 10

Parameter	CAS Number	Analytical Method	Result Q	PQL	Units	Run
Aroclor 1016	12674-11-2	8082A	ND	110	ug/kg	1
Aroclor 1221	11104-28-2	8082A	ND	110	ug/kg	1
Aroclor 1232	11141-16-5	8082A	ND	110	ug/kg	1
Aroclor 1242	53469-21-9	8082A	ND	110	ug/kg	1
Aroclor 1248	12672-29-6	8082A	1700	110	ug/kg	1
Aroclor 1254	11097-69-1	8082A	2200	110	ug/kg	1
Aroclor 1260	11096-82-5	B082A	ND	110	ug/kg	1

Run 1 Acceptance Surrogate Q % Recovery Limits Decachlorobiphenyl 41-132 84 Tetrachloro-m-xylene 80 35-106

PCL = Practical quantitation trait

E = Quantitation of compound exceeded the calibration range H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and > MDL P = The RFD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Semivolatile Organic Compounds by GC/MS

Client: synTerra

Description: BL-SS-57

Date Sampled:08/25/2016 1053

Date Received: 08/26/2016

Laboratory ID:RH26003-020

Matrix: Solid

% Solids: 80.6 08/26/2016 2125

Run	Prop Method	Analytical Method	Dilution	Analysis Date Analyst	Prep Date Batch
1	3550C	8270D	1	08/30/2016 1707 JCG	08/29/2016 2356 20899

Parameter		CAS Number	Analytical Method	Result Q	PQL	Units	Run
Acenaphthene		83-32-9	8270D	ND	400	ug/kg	1
Acenaphthylene		208-96-8	8270D	ND	400	ug/kg	1
Acetophenone		98-86-2	8270D	ND	400	ug/kg	1
Anthracene		120-12-7	8270D	ND	. 400	ug/kg	1
Atrazine		1912-24-9	8270D	ND	400	ug/kg	1
Benzaldehyde		100-52-7	8270D	ND	1000	ug/kg	1
Benzo(a)anthracene		56-55-3	8270D	ND	400	ug/kg	1
Benzo(a)pyrene		50-32-8	8270D	ND	400	ug/kg	1 .
Benzo(b)fluoranthene		205-99-2	8270D	ND	400	ug/kg	1
Benzo(g,h,i)perylene		191-24-2	8270D	ND	400	ug/kg	1
Benzo(k)fluoranthene		207-08-9	8270D	ND	400	ug/kg	1
1,1'-Biphenyl		92-52-4	8270D	ND	400	ug/kg	1
4-Bromophenyl phenyl ether		101-55-3	8270D	ND	400	ug/kg	1
Butyl benzyl phthalato		85-68-7	8270D	ND	400	ug/kg	1
Caprolactam		105-60-2	8270D	ND	1000	ug/kg	1
Carbazole		85-74-8	8270D	ND	400	ug/kg	1
4-Chloro-3-methyl phenol		59-50-7	8270D	ND	400	ug/kg	1
4-Chlorcaniline		106-47-8	8270D	ND	400	ug/kg	1
bls(2-Chloroethexy)methane		111-91-1	8270D	ND	400	ug/kg	1
bls(2-Chloroethyl)ethor		111-44-4	8270D	ND	400	ug/kg	1
is (2-Chloro-1-methylethyl) other		108-60-1	8270D	ND	400	ug/kg	1
2-Chloronaphthalene		91-58-7	8270D	ND	400	ug/kg	1
2-Chlorophenol		95-57-8	8270D	ND	400	ug/kg	1
4-Chlorophenyl phenyl ether		7005-72-3	8270D	ND	400	ug/kg	1
Chrysene		.218-01-9	8270D	ND	400	ug/kg	1
DI-n-butyl phthalate		84-74-2	8270D	ND ·	400	ug/kg	1
Di-n-octylphthalate		117-84-0	8270D	ND	400	ug/kg	1
Dibenzo(a,h)anthracene		53-70-3	3270D	ND	400	ug/kg	1
Dibenzofuran		132-64-9	8270D	ND	400	ug/kg	1
3,3'-Dichlorobenzidine		91-94-1	8270D	ND	1000	ug/kg	1
2,4-Dichlorophonol	7	120-83-2	8270D	ND	400	ug/kg	1
Diethylphthalate		84-66-2	8270D	ND	400	ug/kg	1
Dimethyl phthalate		131-11-3	82700	ND	400	ug/kg	1
,4-Dimethylphenol		105-67-9	8270D	ND	400	ug/kg	1
,6-Dinitro-2-methylphenol		534-52-1	8270D .	ND	1000	- ug/kg	1
,4-Dinitrophenol		51-28-5	8270D	ND	1000	ug/kg	1
,4-Dinitrotoluene		121-14-2	8270D	ND	400	ug/kg	1
6-Dinitrotoluene		606-20-2	8270D	ND	400	ug/kg	1
is(2-Ethylhexyl)phthalate		117-81-7	8270D	ND	400	ug/kg	1
luoranthene		205-44-0	8270D	ND	400	ug/kg	1
luorene		86-73-7	8270D	ND	400	· ug/kg	1
lexachlorobenzena		118-74-1	8270D	ND	400	ug/kg	1
exact lorobutadiene		87-68-3	8270D	ND	400	ug/kg	1
exachlorocyclopentadlene		77-47-4	8270D	ND	1000	ug/kg	1

PQL = Practical quantitation limit

B = Detected in the method blank

J = Estimated result < PQL and ≥ MDL

E = Quantitation of compound exceeded the cafetration range

H = Out of holding time

kii) - Not detected at or above the PQL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of caleria

re applicable, all sall sample analysis are reported on a dry weight basis unless flagged with a "W"

# Semivolatile Organic Compounds by GC/MS

Client:synTerra

Description: BL-SS-57

Date Sampled:08/25/2016 1053

Date Received: 08/26/2016

Laboratory ID:RH26003-020

Matrix: Solid

% Solids: 80.6 08/26/2016 2125

Run	Prep Method	Analytical Method	Dilution	Analysis Date Analyst	Prep Date	Batch
1	3550C	82700	1	08/30/2016 1707 JCG	08/29/2016 2356	20899

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND		400	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		400	ug/kg	1
Isophorone	78-59-1	8270D	ND		400	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		400	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		400	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		810	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		400	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		400	ug/kg	1
Naphthalene	91-20-3	8270D	ND		400	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		400	ug/kg	1
3-Nitroanlline	99-09-2	8270D	ND		400	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		400	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		400	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		400	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1000	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1000	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		400-	ug/kg	1
Pheno!	108-95-2	8270D	ND		400	ug/kg	1
yrono	129-00-0	8270D	ND		400	ug/kg	1
2,4,5-Trichloropheno!	95-95-4	8270D	ND		400	ug/kg	1
2.4.6-Trichlorophenol	88-06-2	8270D	ND		400	ug/kg	1
	Run 1 Accepta	ince					

Surrogate	Q	% Recovery	Limits
2,4,6-Tribromophenol		71	30-117
2-Fluorobiphenyl		63	33-102
2-Fluorophenol -		5B	28-104
Nitrobenzene-d5		70	22-109
Phenol-d5		66	27-103
Terphenyl-d14		77	41-120

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range H = Out of holding time

ND = Not defeated at or above the PQL

J = Estimated result < POL and ≥ MOL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## Organochlorine Pesticides by GC

ClientsynTerra

Description: BL-SS-57

Laboratory ID:RH26003-020

Matrix: Solid

% Solids: 80.6 08/26/2016 2125

Date Sampled:08/25/2016 1053

Date Received: 08/25/2016 Run Prop Method Analytical Method Dilution Analysis Date Analyst Prep Date 09/06/2016 1639 PMS 08/31/2016 2206 21110 3546 8081B 1 CAS Analytical PQL Paramoter Result Q Units Run Number Method Aldrin 309-00-2 8081B ND 6.0 ug/kg 1 gamma-BHC (Lindane) 58-89-9 80818 ND 6.0 ug/kg 1 8081B ND 6.0 alpha-BHC 319-84-6 ug/kg 1 beta-BHC ND 6.0 319-85-7 8081B ug/kg 1 dolta-BHC 319-86-8 8081B ND 6.0 1 ug/kg Chlordano 57-74-9 8081B ND 12 ug/kg 1 cis-Chlordane 5103-71-9 8081B ND 6.0 1 ug/kg trans-Chlordane 5103-74-2 8081B 88 6.0 ug/kg 1 4,4'-DDD 72-54-8 8081B ND 6.0 ug/kg 1 4,4'-DDE 72-55-9 20 8081B 6.0 ug/kg 1 4,4'-DDT 50-29-3 8081B 87 6.0 ug/kg 1 Dieldrin 60-57-1 8081B 140 6.0 ug/kg Endosulfan I 959-98-8 8081B ND 6.0 ug/kg 1 Endosulfan II 33213-65-9 8081B ND 6.0 ug/kg 1 Endosulfan sulfate 1031-07-8 8081B ND 6.0 ug/kg 1 Endrin 72-20-8 8081B 15 P 6.0 ug/kg 1 Endrin aldehyde 7421-03-4 8081B ND 6.0 ug/kg 1 Endrin ketone 53494-70-5 8081B 10 6.0 ug/kg 1 Heptachlor 76-44-8 8081B ND 6.0 ug/kg 1 Heptachlor epoxide 1024-57-3 8081B 7.2 6.0 ug/kg 1 Methoxychlor 72-43-5 8081B ND 24 1 ug/kg Toxaphene 8001-35-2 8081B ND 60 ug/kg Run 1 Acceptance Limits Surrogate % Recovery Decachlorobiphenyl 92 57-110 64 37-91 Tetrachloro-m-xylene

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound excended the calibration range

H = Out of holding time

\*\*\*) = Not detected at at above the POL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of orterta

## TAL Metals

Client synTerra

Description: BL-SS-57

Date Sampled:08/25/2016 1053

Dato Received: 08/26/2016

Laboratory ID:RH26003-020

Matrix: Solid

% Solids: 80.6 08/26/2016 2125

Run	Prep Method	Analytical Method	Dilution	Analysis Date Analysi	Prep Date	Batch
1	7471B	7471B	1	08/30/2016 1216 CLM	08/29/2016 0936	20870
1	3050B	6010C	1	09/03/2016 1441 CJZ	08/31/2016 1101	21039
3	30508	6010C	. 1	09/07/2016 1320 CJZ	08/31/2016 1101	21039

Parameter	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Aluminum	7429-90-5	6010C	10000		19	mg/kg	3
Antimony	7440-36-0	6010C	ND		0.93	mg/kg	1
Arsenic	7440-38-2	6010C	1.7		0.70	mg/kg	1
Barium	7440-39-3	- 6010C	27		1.2	mg/kg	3
Beryllium	7440-41-7	6010C	ND		0.23	mg/kg	3
Cadmium	7440-43-9	6010C	ND		0.23	mg/kg	7
Calcium	7440-70-2	6010C	280		230	mg/kg	1
Chromium	7440-47-3	6010C	11		0.47	mg/kg	1
Cobalt	7440-48-4	6010C	ND		1.2	mg/kg	1
Copper	7440-50-8	6010C	4.8		0.47	mg/kg	1
Iron	7439-89-6	5010C	8500		4.7	mg/kg	3
Lead	7439-92-1	6010C	8.0		0.47	mg/kg	1
Magnesium	7439-95-4	6010C	ND		230	mg/kg	1
Manganese	7439-96-5	6010C	76		0.70	mg/kg	1
Mercury	7439-97-6	7471B	ND		0.092	mg/kg	1
Nickel	7440-02-0	6010C	3.0		1.9	mg/kg	1
Potassium	7440-09-7	6010C	ND		230	mg/kg	3
Selenium	7782-49-2	6010C	ND		0.93	mg/kg	1
Silver	7440-22-4	6010C	ND		0.47	mg/kg	1
Sodium	7440-23-5	6010C	ND		230	mg/kg	3
Thallium	7440-28-0	6010C	ND		2.3	mg/kg	1
Vanadium	7440-62-2	6010C	22		2.3	mg/kg	1
Zinc -	7440-66-6	6010C	9.5		2.3	mg/kg	1

PQL = Practical quantitation (mit

B = Detected in the method blank

E – Quantitation of compound exceeded the calibration range H = Out of holding time

NO = Not detected at or above the POL

J = Estimated resurt < PQL and ≥ MDL

P = The RFD between two GC culumns exceeds 45%

N = Recovery Is out of cnicria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Semivolatile Organic Compounds by GC/MS

Client:synTerra Description: BL-SS-67

Date Sampled:08/24/2016 1336

Date Received: 08/25/2016

Laboratory ID: RH26003-024

Matrix: Solid

% Sollds: 86.2 08/26/2016 2125

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prop Date	Batch
1	3550C	8270D	1	08/30/2016 1821	JCG	08/29/2016 2356	20899

2	CAS	Analytical	D	PQL	11-11-	• • • •
Parameter	Number	Method	Result Q		Units	Ru
Acenaphthene	83-32-9	8270D	ND	380	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND	380	ug/kg	1
Acetophenone	98-86-2	8270D	ND	380	ug/kg	1
Anthracene	120-12-7	8270D	ND	380	ug/kg	1
Atrazine	1912-24-9	8270D	ND	380	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND	960	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND	380	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND	380	ug/kg	1
Benzo(b)fluoranthono	205-99-2	8270D	ND	380	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND	380	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND	380	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND	380	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND	380	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND	380	ug/kg	1
Caprolactam	105-60-2	8270D	ND	960	ug/kg	1
Carbazole	86-74-8	8270D	· ND	380	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND	380	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND	380	ug/kg	1
bls(2-Chloroethoxy)methane	111-91-1	8270D	ND	380	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND	380	ug/kg	1
his (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND	380	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND.	380	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND	380	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	6270D	ND	350	ug/kg	1
Chrysene	218-01-9	8270D	ND	380	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND	380	ug/kg	. 1
Di-n-octylphthalate .	117-84-0	8270D	ND	380	ug/kg	1
Dibenzo(a,h)anthraceno	53-70-3	8270D	ND	380	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND	380	ug/kg	1
3.3'-Dichlorobenzidine	91-94-1	8270D	ND	960	ug/kg	1
,4-Dichlorophonol	120-83-2	8270D	ND	380	ug/kg	1
Diethylphthalate .	84-66-2	8270D	ND	380	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND	380	ug/kg	1
,4-Dimethylphenol	105-67-9	8270D	ND	380	ug/kg	1
6-Dinitro-2-methylphenol	534-52-1	8270D	ND	960	ug/kg	1
4-Dinitrophenol	51-28-5	8270D	ND	960	ug/kg	1
4-Dinitrotokiene	121-14-2	8270D	ND	380	ug/kg	1
,6-Dinitrotoluene	606-20-2	8270D	ND	380	ug/kg	1
s(2-Ethylhexyl)phtholata	117-81-7	8270D	ND	380	ug/kg	1
uoranthana	206-44-0	8270D	ND	380	ug/kg	1.
uorene	86-73-7	8270D	ND	380	ug/kg	1
exachiorobenzone	118-74-1	8270D	ND	380	ug/kg	1
exactilorobetzone exactilorobutadiene	87-68-3	8270D	ND .	380	ug/kg	1
exachlorocyclopentadiene	77-47-4	6270D	ND .	960	ug/kg	1

PCC- Practice quantitation Emit

B . Detected in the method blank

E = Quantitation of compound exceeded the calibration range - H = Out of holding time.

ND = Not detected at or above the PQL

 $J = Estimated result < PQL \ and \geq MDL \qquad P = The RPD \ between two GC \ columns \ exceeds \ 40\%$ 

N = Recovery is out of criteria

ere applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Semivolatile Organic Compounds by GC/MS

Client: synTerra

Description: BL-SS-67

Date Sampled:08/24/2016 1336

Date Received: 08/26/2016

Laboratory ID: RH26003-024

Matrix: Solid

% Sollds: 86.2 08/26/2016 2125

Run	Prep Method	Analytical Method	Dilution	Analysis Date Analys	t Prep Date	Batch
1	3550C	8270D	1	08/30/2016 1821 JCG	08/29/2016 2356	20899

Parameter	CAS Number	Analytical Method	Result Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND	380	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND	380	ug/kg	1
Isophorone .	78-59-1	8270D	ND .	380	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND	380	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND	380	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND	770	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	82700	ND	380	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	82700	ND	380	ug/kg	1
Naphthalene	91-20-3	8270D	ND	380	ug/kg	1
2-Nitroanillne	88-74-4	8270D	ND	380	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND	380	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND	380	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND	380	ug/kg	1
2-Nitrophenal	88-75-5	82700	ND	380	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND	960	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND	960	ug/kg	1
Phenanthrene	85-01-8	8270D	ND	380	ug/kg	1
Phenot	108-95-2	8270D	ND	380	ug/kg	1
Pyrene	129-00-0	8270D	ND	380	úg/kg	1
2.4,5-Trichlorophenol	95-95-4	8270D	ND	380	ug/kg	1
2,4,6-Trichlorophenol	88-05-2	8270D	ND	380	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2,4,6-Tribromophenol		71	30-117
2-Fluorobiphenyl		65	33-102
2-Fluorophenol		60	28-104
Nitrobanzene-d5		67	22-109
Phenol-d5		65	27-103
Terphenyl-d14		74	41-120

POL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range - H = Out of holding time P = The RPD between two GC columns exceeds 40%

ND = Not detacled at or above the PQL J = Estimated result < PQL and ≥ MDL Where applicable, all self-sample analysis are reported on a dry weight basis unless flagged with a "W"

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# Organochlorine Pesticides by GC

Client:synTerra Description: BL-SS-67

Date Sampled:08/24/2016 1336

, Date Received: 08/26/2016

Laboratory ID: RH26003-024

Matrix: Solid

% Solids: 86.2 08/26/2016 2125

Run	Prep Method	Analytical Method	Dilution	Analysis Date Analyst	Prep Date	Batch
1	3546	BC81B	10	09/02/2016 1257 PMS	08/31/2016 2206	21110

Parameter	CAS Number	Analytical Method	Result	Q	PQL.	Units	Run
Aldrin	309-00-2	8081B	ND		11	ug/kg	1
gamma-BHC (Lindane)	58-89-9	8081B	ND		11	ug/kg	1
alpha-BHC	319-84-6	8081B	ND.		-11	ug/kg	1
beta-BHC	319-85-7	8081B	ND		11	ug/kg	1
delta-BHC	319-86-8	8081B	ND		11	ug/kg	1
Chlordano	57-74-9	8081B	ND		22	ug/kg	1
cis-Chlordane	5103-71-9	8081B	ND		11	ug/kg	1
trans-Chlordane	5103-74-2	8081B	37		11	ug/kg	1
4,4'-DDD	72-54-8	B081B	ND		11	ug/kg	1.
4,4'-DDE	72-55-9	8081B	16	P	11	ug/kg	1
4,4'-DDT	50-29-3	80818	68		11	ug/kg	1
Dieldrin	60-57-1	8081B	66		11	ug/kg	1
Endosulfan I	959-98-8	8081B	ND		11	ug/kg	1
Endosulfan II	33213-65-9	8081B	ND	*	11	ug/kg	1
Endosulfan sulfate	1031-07-8	8081B	ND		11	ug/kg	1
Endrin	72-20-8	8081B	ND		11	ug/kg	1
Endrin aldehyde	7421-93-4	8081B	ND		11	ug/kg	1
Endrin kelone	53494-70-5	8081B	ND		11	ug/kg	1
Heptachlor	76-44-8	8081B	ND		11	ug/kg	1
leptachlor epoxide	1024-57-3	8081B	ND		11	ug/kg	1
lethoxychlor	72-43-5	8081B	ND		44	ug/kg	1
Toxaphene	8001-35-2	8081B	ND		110	ug/kg	1
	Run 1 Accepta	nce					

Acceptance Limits Run 1 Surrogate % Recovery Decachlorobiphanyl 86 57-110 Tetrachloro-m-xylene 37-91 70

PQL = Practical quentiation limit

D = Detested in the method blank

E = Quantitation of compound exceeded the calibration range H = Out of holding time

\*\*\*) = Not detected at or above the POL.

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

re applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## TAL Metals

Client; synTerra

Description: BL-SS-67

Date Sampled:08/24/2016 1336

Date Received: 08/26/2016

Laboratory ID: RH26003-024

Matrix: Solid

% Solids: 86.2 03/26/2016 2125

Run	Prep Method	Analytical Method	Dilution	Analysis Date Analys	Prep Date Bate	ch
1	7471B	7471B	1	08/30/2016 1229 CLM	08/29/2016 0936 2087	70
1	3050B	6010C	1	09/03/2016 1459 CJZ	08/31/2016 1101 2103	39
3	3050B	6010C	1	09/07/2016 1348 CJZ	08/31/2016 1101 2103	39

Williams all the second	CAS	Analytical				
Parameter	Number	Method	Result Q	PQL	Units	Run
Aluminum	7429-90-5	6010C	14000	20	mg/kg	3
Antimony	7440-36-D	6010C	ND	1.0	mg/kg	1
Arsenic	7440-38-2	6010C	2.0	0.76	mg/kg	. 1
Barium	7440-39-3	6010C	43	1.3	mg/kg	3
Berytilum	7440-41-7	6010C	ND .	0.25	mg/kg	3
Cadmium	7440-43-9	6010C	ND	0.25	mg/kg	1
Calcium	7440-70-2	6010C	1400	250	mg/kg	1
Chromium	7440-47-3	6010C	15	0.51	mg/kg	1
Cobalt	7440-48-4	6010C	ND	1.3	mg/kg	1
Copper	7440-50-B	6010C	6.3	0.51	mg/kg	1
Iron	7439-89-6	6010C	10000	5.1	mg/kg	3
Lead	7439-92-1	6010C	9.4	0.51	mg/kg	1
Magnesium	7439-95-4	6010C	360	250	mg/kg	1
Manganese	7439-96-5	6010C	130	0.76	mg/kg	1
Mercury	7439-97-6	7471B	ND	0.095	mg/kg	1
Nickel	7440-02-0	6010C	4.3	2.0	mg/kg	1
Potassium	7440-09-7	6010C	360	250	mg/kg	3
Selenium	7782-49-2	6010C	ND	1.0	mg/kg	1
Silver	7440-22-4	6010C	ND	0.51	mg/kg	1
Sodium	7440-23-5	6010C	ND	250	mg/kg	3
Thallium	7440-28-0	6010C	ND	2.5	mg/kg	1
/anadium	7440-62-2	6010C	27	2.5	mg/kg	1
Zinc	7440-66-6	6010C	18	2.5	mg/kg	1

PCL = Practical cuantitation finit NC = Not detected at or above the POL B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range H = Out of holding time J = Estimated result < PQL and ≥ MOL P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample enalysis are reported on a dry weight basis unless flagged with a "W"

Client:synTerra .

Description: BL-SS-67-DUP

Laboratory ID:RH26003-033

Matrix: Solid

Date Sampled: 68/24/2016 1336

% Solids: 87.3 08/26/2016 2125

Date Received: 08/25/2016

Run Prep Method Cleanup Analytical Method Dilution Analysis Date Analyst Prep Date Batch
1 3546 3660B/3665A 8082A 10 09/01/2016 2159 MEM 08/31/2016 2206 21111

					7		
Parameter		CAS Number	Analytical Method	Result Q	PQL.	Units	Run
Aroclor 1016		12674-11-2	8082A	ND	110	ug/kg	1
Arodor 1221		11104-28-2	8082A	ND	110	ug/kg	1
Arodor 1232		11141-16-5	8082A	ND	110	ug/kg	1
Aroclor 1242		53469-21-9	8082A	ND	110	ug/kg	1
Aroclor 1248		12672-29-6	8082A	1200	110	ug/kg	1
Aroclor 1254		11097-69-1	8082A	1600	110	ug/kg	1
Aroclor 1260	V	11096-82-5	8082A	ND	110	ug/kg	1
Surrogate	Q 9	Run 1 Accept Kecovery Lim					
Decachloroblphenyl		76 41-1	32				
Tetrachloro-m-xylene		67 35-1	06				

POL = Practical quantitation limit

B = Dotocled in the method blank

E = Quantitation of compound exceeded the calibration range

H = Out of holding time

") = Not detected at or above the PQL

B = Datected in the method blank

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

are applicable, all sall sample analysis are reported on a dry weight basis unless flegged with a "W"

# Semivolatile Organic Compounds by GC/MS

Client: synTerra

Description: BL-SS-67-DUP

Date Sampled:08/24/2016 1336

Date Received: 08/26/2016

Laboratory ID:RH26003-033

Matrix: Solid

% Solids: 87.3 08/26/2016 2125

Run	Prep Method	Analytical Method	Dilution	Analysis Date Analyst	Prep Date	Batch
1	3550C	8270D	1	09/02/2016 2010 RBH	08/31/2016 2310	21109

Parameter	CAS Number	Analytical Method	Result Q	PQL	Units	Run
Acenaphthane	83-32-9	8270D	ND	370	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND	370	ug/kg	1
Acetophenone	98-86-2	8270D	ND	370	ug/kg	1
Anthracene	120-12-7	8270D	ND	370	ug/kg	1
Atrazino	1912-24-9	8270D	ND	370	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND	930	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND	370	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND	370	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND	370	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND	370	ug/kg	7
Benzo(k)fluoranthena	207-08-9	8270D	ND	370	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND	370	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND	370	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND	370	ug/kg	1
Caprolactam	105-60-2	8270D	ND	930	ug/kg	1
Carbazole	86-74-8	8270D	ND	370	ug/kg	1
4-Chloro-3-methyl phonol	59-50-7	8270D	ND	370	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND	370	ug/kg	1
bls(2-Chloroethoxy)methane	111-91-1	8270D	ND	370	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND	370	ug/kg	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND	370	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND	370	ug/kg	1
2-Chlorophanol	95-57-8	8270D	ND	370	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND	370	ug/kg	1
Chrysene	218-01-9	8270D	ND	370	ng/kū	1
Di-n-butyl phthalate	84-74-2	8270D	ND	370	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND	370	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	B270D	ND	370	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND	370	ug/kg	1
3,3'-Dichlarobenzidine	91-94-1	8270D	ND .	930	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND	370	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND	370	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND	370	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND	370	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND	930	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND	930	ug/kg	1
2,4-Dinitratoluana	121-14-2	8270D	ND	370	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND	370	ug/kg	1
bls(2-Ethylhexyl)phthalate	117-81-7	8270D	ND	370	ug/kg -	1
luoranthene	206-44-0	8270D	ND	370	ug/kg	1
luorene	86-73-7	8270D	ND	370	ug/kg	1
fexachlorobenzene .	118-74-1	8270D	ND	370	ug/kg *	1
Hexachtorobutadione	87-68-3	8270D	ND .	370	ug/kg	1
fexachlorocyclopentadione	77-47-4	B270D	ND	930	ug/kg	1

PQL = Practical quantitation finit

B = Detected in the method blank

E = Oranitation of compound exceeded the calibration range. H = Out of holding time

N = Recovery Is out of criteria

NO = Not detected at or above the PQL J = Esdmated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40% Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Semivolatile Organic Compounds by GC/MS

Client:synTerra

Description: BL-SS-67-DUP

Date Sampled:08/24/2016 1336

Date Received: 08/26/2016

Laboratory ID: RH26003-033

Matrix: Solid

% Solids: 87.3 08/26/2016 2125

Run	Prep Mothod	Analytical Method	Dilution	Analysis Date Analyst	Prep Date Batch
1	3550C	8270D	1	09/02/2016 2010 RBH	08/31/2016 2310 21109

	CAS	Analytical				
Parameter	Number	Method	Result Q	PQL	Units	Run
Hexachloroethane	67-72-1	8270D	ND	370	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	· 8270D	ND	370	ug/kg	1
Isophorone	78-59-1	8270D	ND	370	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND	370	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND	370	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND	750	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND	370	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	82700	ND	370	ug/kg	1
Naphthalene	91-20-3	8270D	ND	370	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND -	370	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND	370	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND	370	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND	370	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND	370	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND	930	ug/kg	. 1
Pentachlorophenol	87-86-5	8270D	ND	930	ug/kg	1
Phenanthrene ·	85-01-8	8270D	ND	370	ug/kg	1
Phenol	108-95-2	8270D	ND	370	ug/kg	1
Pyrene	129-00-0	8270D	CM	370	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND	370	ug/kg	1
.4,6-Trichlorophenol	88-06-2	B270D	ND	370	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits			
2,4,6-Tribromophenol		68	30-117			
2-Fluoroblphenyl		58	33-102		Y	
2-Fluorophenot		61	28-104	741		
Nitrobenzene-d5		59	22-109			7
Phenof-d5		64	27-103			
Torphenyl-d14		87	41-120			

POL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range - H = Out of holding time

= Not detected at or above the PQL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of coloria

a applicable, all soll sample analysis are reported on a dry weight basis unless flagged with a "W"

# Organochlorine Pesticides by GC

Client:synTerra

Description: BL-SS-67-DUP

Date Sampled:03/24/2016 1336

Run Prep Method

Endosulfan sulfate

Endrin aldehyde

Heptachlor epoxide

Endrin katona

Methoxychlor

Heptachlor

Endrin

Date Received: 08/26/2016

Laboratory ID: RH26003-033

Matrix Solid

11

11

11

11

11

11

45

110

ug/kg

ug/kg

ug/kg

ug/kg

ug/kg

ug/kg

ug/kg

ug/kg

1

1

Batch

% Solids: 87.3 08/26/2016 2125

1 3546	8081B 10 09/02/2016 1341 PMS 08/31/2016 2206 21110							
Parameter	N	CAS	Analytical Method	Result	Q PQL	Units	Run	
Aldrin	30	9-00-2	80818	ND	11	ug/kg	1	
gamma-BHC (Lindane)	5	8-89-9	8081B	ND	11	ug/kg	1	
alpha-BHC	31	9-84-6	80B1B	ND	11	ug/kg	1	
beta-BHC	31	9-85-7	8081B	ND	11	ug/kg	1	
delta-BHC	31	9-86-8	8081B	ND	11	ug/kg	1	
Chlordane	5	7-74-9	8081B	ND	22	ug/kg	1	
cis-Ch!ordane	510	3-71-9	8081B	ND	11	ug/kg	1	
trans-Chlordane	510	3-74-2	8081B	27	11	ug/kg	1	
4,4'-DDD	7:	2-54-8	80818	ND	11	ug/kg	- 1	
4,4'-DDE	7:	2-55-9	8081B	ND	11	ug/kg	1	
4,4'-DDT	5	0-29-3	8081B	47	11	ug/kg	1	
Dieldrin	6	-57-1	8081B	46	11	ug/kg	1	
Endosulfan I	959	8-89-	8081B	ND	11	ug/kg	1	
Endosulfan II	33213	-65-9	8081B	ND	11	ug/kg	1	

8081B

8031B

8081B

8081B

8081B

8081B

8081B

8081B

ND

ND

ND

ND

ND

ND

ND

ND

Analytical Method Dilution Analysis Date Analyst

1031-07-8

7421-93-4

53494-70-5

72-20-8

76-44-8

1024-57-3

72-43-5

		8001	-35-2
Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Decachlorobiphenyl		70	57-110
Tetrachloro-m-xylene		68	37-91

POL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the cultivation range

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and ≥ MQL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

## TAL Metals

Client: synTerra

Description: BL-SS-67-DUP

Date Sampled:08/24/2016 1336

Laboratory ID: RH26003-033

Matrix: Solld

% Solids: 87.3 08/26/2016 2125

| Date Received: 08/26/2016

Run Prep Method Analytical Method Dilution Analysis Date Analyst Prep Date 7471B 7471B 08/30/2016 1238 CLM 08/29/2016 0936 20870 1 1 3050B 6010C 09/03/2016 1526 CJZ 08/31/2016 1101 21039 3 3050B 6010C 1 09/07/2016 1406 CJZ 08/31/2016 1101 21039

Parameter		CAS Number	Analytical Method	Result Q	PQL	Units	Run
Aluminum	7.	429-90-5	601DC	18000	20	mg/kg	3
Antimony	7-	440-36-0	6010C	ND	0.99	mg/kg	1
Arsenic	74	140-38-2	6010C	2.1	0.74	mg/kg	1
Barium	74	140-39-3	6010C	34	1.3	mg/kg	3
Beryllium	7/	140-41-7	6010C	ND	0.25	mg/kg	3
Cadmlum	70	140-43-9	6010C	ND	0.25	mg/kg	1
Calcium	74	140-70-2	6010C	950	250	mg/kg	1
Chromium	74	140-47-3	6010C	18	0.49	mg/kg	1
Cobalt	74	140-48-4	- 6010C	ND	1.3	mg/kg	1
Copper	7.4	40-50-8	6010C	6.4	0.49	mg/kg	1
Iron	74	39-89-6	6010C	12000	4.9	mg/kg	3
Lead	74	39-92-1	6010C	8.4	0.49	mg/kg	1
Magneslum	74	39-95-4	6010C	380	250	mg/kg	1
Manganese	74	39-96-5	6010C	96	0.74	mg/kg	1
Mercury	. 74	39-97-6	7471B	ND	0.093	mg/kg	1
Nickel	74	40-02-0	6010C	5.8	2.0	mg/kg	1
Potassium	74	40-09-7	6010C	380	250	mg/kg	3
Selenium	77	82-49-2	6010C	ND	0.99	mg/kg	1
Silver	74	40-22-4	6010C	ND	0.49	mg/kg	1
Sodium	74	40-23-5	6010C	ND	250	mg/kg	3
Thallium -	74	40-28-0	6010C	ND	2.5	mg/kg	1
Vanadium	74	40-62-2	6010C	33	2.5	mg/kg-	1
Zinc	74	40-66-6	6010C	14	2.5	mg/kg	3

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N = Recovery is out of critisala

" = Not detected at crabove the PQL

J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40%

to applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W\*



September 16, 2016

(b)(6) 252 Pecan Drive Cheraw, SC 29520

Dear (b)(6)

Thank you for allowing the Department to collect soil samples in your yard. During the week of August 22, 2016, we collected samples of the soil near the drainage ditch in your backyard. The samples were collected from ground surface to a depth of 2". The samples were tested to determine the levels of polychlorinated biphenyls (PCBs) that may be in the soil.

The table below contains the results of the samples taken on your property. The screening value for PCBs is 1,000 micrograms/kilogram (ug/kg). We use screening values to determine where additional evaluation is needed. Sample locations with PCB results above 1,000 ug/kg require further investigation.

Sample ID	Contaminant	Sample Result (ug/kg)		
BL-SS-70	Total PCBs	85,000		

Based on the results, DHEC has determined that additional sampling is needed to determine the extent of this contamination. We will be in your area the week of September 19, 2016, to collect additional samples and distribute information.

Additional information will be shared with you as we continue to investigate this area. As a precautionary measure, DHEC recommends the following safeguards for your family:

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- Limit the amount of dust entering your home by using a doormat to wipe feet before entering
- Wipe off window sills, table tops and other surfaces that children can reach or that
  are used for eating
- When mowing the lawn, avoid running the mower over patches of dirt or wet down dirt areas prior to mowing. Avoid mowing the area next to the drainage ditch.

Until we confirm that the levels of PCBs in the soil are below the screening level, DHEC recommends that you avoid the area near the drainage ditch in your backyard and minimize the amount of dust and dirt entering your home.

If you have any questions regarding the attached map or information, please give me a call at (803) 898-0816.

Sincerely,

Judy Canova, Project Manager State Remediation Section

Cc:

Buck Graham

Donna Moye

File



#### FORMER BURLINGTON INDUSTRIES SITE

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DHEC is still in the investigation phase and will be conducting additional sampling in your area the week of September 19<sup>th</sup>, 2016. Additional information will be shared with you as we continue our investigation. Once we have the results of this next round of sampling, a community meeting will be scheduled to discuss the results as well as the next steps. If your yard has been sampled or is sampled in the future, you will receive the results as soon as they are available.

#### Polychlorinated Biphenyls (PCBs) Information Sheet

#### What are PCB's?

PCB stands for polychlorinated biphenyls. This is not one chemical, but a class made up of 209 chemicals. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. PCBs have no known taste or smell. PCBs were used in manufacturing processes from 1929 until they were banned in 1979.

#### How were PCBs used?

Historically, PCBs were used as coolants and lubricants in transformers, capacitors and other electrical equipment because they are good insulators and don't burn. PCBs were also historically used as fluids in old florescent lighting fixtures and electrical transformers, as well as in products like cutting oils, hydraulic oils, and carbonless copy paper.

In 1979, the United States banned the manufacture of PCBs because they were found to be harmful to people and the environment. However, once PCBs are in the environment, they do not break down easily and may remain where they were released for very long periods of time.

#### Where are PCBs found today?

Because PCBs were used for so long prior to being regulated, low levels are found throughout the environment; typically in soils and in sediments in streams, rivers or ponds. They are sometimes found at higher levels in areas where they were disposed of prior to environmental regulations or where they have been illegally dumped.

#### How can PCBs harm me and my family?

In this situation of historical contamination, PCBs are primarily a hazard through skin contact. The precautions found on the other side of this page are ways you can reduce your potential for exposure to these chemicals. The most common health effects from exposure to PCBs is from workplace exposure (mostly historical) to the liquid oils through contact with the skin. PCBs are associated with skin rashes and a specific type of acne. Workplace exposures have also been associated with changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects.

#### Where can I find more information about PCBs?

For additional information about PCBs, potential health effects, clean-up and disposal of waste, please visit the U. S. Environmental Protection Agency's website at <a href="https://www.epa.gov/PCBs">www.epa.gov/PCBs</a>.

If you would like additional information about the hazards of PCB's, please refer to the full ToxFAQ sheet produced by the Centers for Disease Control and Prevention's Agency for Toxic Substances and Disease Registry located: http://www.atsdr.cdc.gov/toxfags/tfacts17.pdf

Client:synTerra

Description: BL-SS-70

Date Sampled:08/25/2016 1142

Jate Received: 08/26/2016

Leboratory ID:RH26003-001

Matrix: Solid

% Solids: 82.0 08/26/2016 2125

Run	Prep Method	Cleanup	Analytical Method	Dilution	Analysis Date	Analyst	Prop Date	Batch
1	3546	3660B/3665A	8082A	500	09/01/2016 0030	MEM	08/30/2016 2147	21021

Parameter	*	CAS Number	Analytical Method	Result	Q	PQL	Units	Run
Aroclar 1016		12674-11-2	8082A	ND		6000	ug/kg	1
Aroclor 1221		11104-28-2	8082A	ND		6000	ug/kg	1
Aroclor 1232		11141-16-5	8082A	ND		6000	- ug/kg	1
Aroclor 1242		53469-21-9	8082A	ND		6000	ug/kg	1
Aroclor 1248		12672-29-6	8082A	37000		6000	ug/kg	1
Aroclor 1254		11097-69-1	8082A	48000		6000	ug/kg	1
Aroclor 1260		11096-82-5	8082A	ND		6000	ug/kg	1

Surrogate	Q	% Recovery	Limits
Decachlorobiphenyl		127	41-132
Tetrachloro-m-xylene		92	35-105

PCL - Practical quantifiction limit

E = Detected in the method blank

 $E \approx Guantitation of compound exceeded the calibration range$ 

H = Out of holding time

ND = Not detected at or above the PQL

J = Estimated result < PQL and > MDL

P = The RPD between two GC columns exceeds 43%

N = Recovery is out of criteria

ne applicable, all sell semple analysis are reported on a dry weight basis unless fingged with a "W"



September 16, 2016

(b)(6) Personal 600 Robin Hood Drive Cheraw, SC 29520

Dear (b)(6)

Thank you for allowing the Department to collect soil samples in your yard. During the week of August 22, 2016, we collected samples of the soil near the drainage ditch in your backyard. The samples were collected from ground surface to a depth of 2". The samples were tested to determine the levels of polychlorinated biphenyls (PCBs) that may be in the soil.

The table below contains the results of the samples taken on your property. The screening value for PCBs is 1,000 micrograms/kilogram (ug/kg). We use screening values to determine where additional evaluation is needed. Sample locations with PCB results above 1,000 ug/kg require further investigation.

Sample ID	Contaminant	Sample Result (ug/kg)
BL-SS-63	Total PCBs	<11 (not detected)

Based on other results in the area, DHEC has determined that additional sampling is needed to determine the extent of this contamination. We will be in your area the week of September 19, 2016, to collect additional samples and distribute information.

Additional information will be shared with you as we continue to investigate this area. As a precautionary measure, DHEC recommends the following safeguards for your family:

- Stay out of the drainage ditch and do not let children or animals play in your backyard near the drainage ditch
- · Wash your hands before eating, sleeping or caring for children
- · Wash your hands after playing or working in the yard
- · Don't let children eat dirt
- Limit the amount of dust entering your home by using a doormat to wipe feet before entering
- Wipe off window sills, table tops and other surfaces that children can reach or that are used for eating
- When mowing the lawn, avoid running the mower over patches of dirt or wet down dirt areas prior to mowing. Avoid mowing the area next to the drainage ditch.

Until we confirm that the levels of PCBs in the soil are below the screening level, DHEC recommends that you avoid the area near the drainage ditch in your backyard and minimize the amount of dust and dirt entering your home.

If you have any questions regarding the attached map or information, please give me a call at (803) 898-0816.

Sincerely,

Judy Canova, Project Manager State Remediation Section

Cc: Buck Graham

Donna Moye

File



#### FORMER BURLINGTON INDUSTRIES SITE

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#### Polychlorinated Biphenyls (PCBs) Information Sheet

#### What are PCB's?

PCB stands for polychlorinated biphenyls. This is not one chemical, but a class made up of 209 chemicals. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. PCBs have no known taste or smell. PCBs were used in manufacturing processes from 1929 until they were banned in 1979.

#### How were PCBs used?

Historically, PCBs were used as coolants and lubricants in transformers, capacitors and other electrical equipment because they are good insulators and don't burn. PCBs were also historically used as fluids in old florescent lighting fixtures and electrical transformers, as well as in products like cutting oils, hydraulic oils, and carbonless copy paper.

In 1979, the United States banned the manufacture of PCBs because they were found to be harmful to people and the environment. However, once PCBs are in the environment, they do not break down easily and may remain where they were released for very long periods of time.

### Where are PCBs found today?

Because PCBs were used for so long prior to being regulated, low levels are found throughout the environment; typically in soils and in sediments in streams, rivers or ponds. They are sometimes found at higher levels in areas where they were disposed of prior to environmental regulations or where they have been illegally dumped.

#### How can PCBs harm me and my family?

In this situation of historical contamination, PCBs are primarily a hazard through skin contact. The precautions found on the other side of this page are ways you can reduce your potential for exposure to these chemicals. The most common health effects from exposure to PCBs is from workplace exposure (mostly historical) to the liquid oils through contact with the skin. PCBs are associated with skin rashes and a specific type of acne. Workplace exposures have also been associated with changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects.

#### Where can I find more information about PCBs?

For additional information about PCBs, potential health effects, clean-up and disposal of waste, please visit the U. S. Environmental Protection Agency's website at <a href="https://www.epa.gov/PCBs">www.epa.gov/PCBs</a>.

If you would like additional information about the hazards of PCB's, please refer to the full ToxFAQ sheet produced by the Centers for Disease Control and Prevention's Agency for Toxic Substances and Disease Registry located: <a href="http://www.atsdr.cdc.gov/toxfaqs/tfacts17.pdf">http://www.atsdr.cdc.gov/toxfaqs/tfacts17.pdf</a>

ClientsynTerra

Description: BL-SS-63

Date Sampled:08/24/2016 1600

Date Received: 08/26/2016

Laboratory ID:RH26003-007

Matrix: Solld

% Solids: 85.2 08/26/2016 2125

Run Prep Method Cleanup Analytical Method Dilution Analysis Date Analyst 1 3546 3660B/3665A 8062A 09/06/2016 1264 MEM 09/02/2016 1100 21229 1

Parameter		CAS Number	Analytical Method	Rosult	Q PQL	Units	Run
Aroclor 1016		12674-11-2	8082A	ND	11	ug/kg	1
Aroclor 1221		11104-28-2	8082A	ND	11	ug/kg	1
Aroclor 1232		11141-16-5	8082A	ND	11	ug/kg	1
Aroclor 1242	1 9	53469-21-9	8082A	ND	11	ug/kg	1
Aroclor 1248		12672-29-6	8082A	ND	11	ug/kg	1
Arocfor 1254		11097-69-1	8082A	ND	11	ug/kg	1
Arocfor 1260.		11096-82-5	8082A	ND	11	ug/kg	1

Surrogate	Q	% Recovery	Acceptance Limits
Decachloroblphenyl		68	41-132
Tetrachloro-m-xylene		66	35-106

PQL = Practical quantitation limit

E = Quantitation of compound exceeded the calibration range <math>-H = Qui of holding time

- - Not detected at prabove the PQL

J = Estimated result < PQL and > MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

re applicable, all soll sample analysis are reported on a dry weight basis unless flagged with a "W"



September 16, 2016

#### (b)(6) Personal Privacy

234 Pecan Drive Cheraw, SC 29520

# Dear (b)(6) Personal

Thank you for allowing the Department to collect soil samples in your yard. During the week of August 22, 2016, we collected samples of the soil near the drainage ditch in your backyard. The samples were collected from ground surface to a depth of 2". The samples were tested to determine the levels of polychlorinated biphenyls (PCBs) that may be in the soil.

The table below contains the results of the samples taken on your property. The screening value for PCBs is 1,000 micrograms/kilogram (ug/kg). We use screening values to determine where additional evaluation is needed. Sample locations with PCB results above 1,000 ug/kg require further investigation.

Sample ID	Contaminant	Sample Result (ug/kg)
BL-SS-75	Total PCBs	340,000
BL-SS-75A	Total PCBs	5,000
BL-SS-75B	Total PCBs	2,410
BL-SS-75C	Total PCBs	880
BL-SS-75D	Total PCBs	1,200

Based on the results, DHEC has determined that additional sampling is needed to determine the extent of this contamination. We will be in your area the week of September 19, 2016, to collect additional samples and distribute information.

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When mowing the lawn, avoid running the mower over patches of dirt or wet down
dirt areas prior to mowing. Avoid mowing the area next to the drainage ditch.

Until we confirm that the levels of PCBs in the soil are below the screening level, DHEC recommends that you avoid the area near the drainage ditch in your backyard and minimize the amount of dust and dirt entering your home.

If you have any questions regarding the attached map or information, please give me a call at (803) 898-0816.

Sincerely,

Judy Canova, Project Manager State Remediation Section

Cc:

Buck Graham Donna Moye

File



#### FORMER BURLINGTON INDUSTRIES SITE

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- Limit the amount of dust entering your home by using a doormat to wipe feet before entering.
- When moving the lawn, avoid running the mover over patches of dirt or, alternatively, wet down dirt areas prior to moving. Avoid moving the area next to the drainage ditch.

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#### How were PCBs used?

Historically, PCBs were used as coolants and lubricants in transformers, capacitors and other electrical equipment because they are good insulators and don't burn. PCBs were also historically used as fluids in old florescent lighting fixtures and electrical transformers, as well as in products like cutting oils, hydraulic oils, and carbonless copy paper.

In 1979, the United States banned the manufacture of PCBs because they were found to be harmful to people and the environment. However, once PCBs are in the environment, they do not break down easily and may remain where they were released for very long periods of time.

#### Where are PCBs found today?

Because PCBs were used for so long prior to being regulated, low levels are found throughout the environment; typically in soils and in sediments in streams, rivers or ponds. They are sometimes found at higher levels in areas where they were disposed of prior to environmental regulations or where they have been illegally dumped.

#### How can PCBs harm me and my family?

In this situation of historical contamination, PCBs are primarily a hazard through skin contact. The precautions found on the other side of this page are ways you can reduce your potential for exposure to these chemicals. The most common health effects from exposure to PCBs is from workplace exposure (mostly historical) to the liquid oils through contact with the skin. PCBs are associated with skin rashes and a specific type of acne. Workplace exposures have also been associated with changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects.

#### Where can I find more information about PCBs?

For additional information about PCBs, potential health effects, clean-up and disposal of waste, please visit the U. S. Environmental Protection Agency's website at <a href="https://www.epa.gov/PCBs">www.epa.gov/PCBs</a>.

If you would like additional information about the hazards of PCB's, please refer to the full ToxFAQ sheet produced by the Centers for Disease Control and Prevention's Agency for Toxic Substances and Disease Registry located: <a href="http://www.atsdr.cdc.gov/toxfaqs/tfacts17.pdf">http://www.atsdr.cdc.gov/toxfaqs/tfacts17.pdf</a>

Client: synTerra

Description: BL-SS-75

Date Sampled:08/25/2016 1108

Date Received: 08/26/2016

Laboratory ID: RH26003-013

Matrix: Solid

% Solids: 84.5 08/26/2016 2125

Run Prop Mothod	Cleanup Analytical	Method Dil	lution /	Analysis Date A	nalyst	Prep Date	Batch
1 3546	3660B/3665A	8082A 1	1000 0	9/07/2016 1049	MEM	09/02/2016 1100	21229

Parameter		No	CAS	Analytical Method	Result	Q	PQL		Units	Run
Arodor 1016		1267	4-11-2	8082A	ND		11000	**	ug/kg	1
Aroclor 1221		11104	4-28-2	8082A	ND		11000		ug/kg	1
Arodor 1232		1114	1-16-5	8082A	ND		11000		ug/kg	1
Aroclor 1242		53469	9-21-9	8082A	ND		11000		ug/kg	1
Aroclor 1248		12672	2-29-6	8082A	160000		11000		ug/kg	1
Aroclor 1254		11097	7-69-1	8082A	180000		11000		ug/kg	1
Aroclor 1260		11096	3-82-5	8082A	ND		11000		ug/kg	1
Surrogate	Q	Run 1 % Recovery	Acceptar Limit				×			
Decachlorobiphenyl	N	224	41-132	!						
Letrachloro-m-xylene		71	35-106	i						

PGL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range H = Out of holding time

in - Not delected at or above the PQL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

re applicable, all sell sample enalysis are reported on a dry weight basis unless flagged with a "W"

Client:synTerra

Description: BL-SS-75A

Date Sampled:08/25/2016 1618

Date Received: 08/26/2016

Laboratory ID: RH26003-029

Matrix: Solid

% Solids: 84.5 08/26/2016 2125

Run Prep Method Cleanup Analytical Method Dilution Analysis Date Analyst Prep Date 09/07/2016 1440 MEM 09/02/2016 1925 21292 1 3546 3660B/3665A 8082A 20

- A	CAS	Analytical				
Parameter	 Number	Method	Result Q	PQL	Units	Run
Arocfor 1016	12674-11-2	8082A	ND	240	ug/kg	1
Aroclor 1221	11104-28-2	B082A	ND	240	ug/kg	1
Aroclor 1232	11141-16-5	8082A	ND	240	ug/kg	1
Aroclor 1242	53469-21-9	8082A	ND	240	ug/kg	1
Aroclor 1248	12672-29-6	8082A	2100	240	ug/kg	1
Aroclor 1254	11097-69-1	B082A	2900	240	ug/kg	1
Aroclor 1260	11096-82-5	8082A	ND	240	ug/kg	1

Run 1 % Recovery Limits Surrogato Decachlorobiphenyl 105 41-132 91 35-106 Tetrachloro-m-xylene

ND = Not detected at or above the PQL

J = Estimated result < PQL and > MDL P = The RPD helween two GC columns exceeds 40%

N - Recovery is out of criteria

Client:synTerra

Description: BL-SS-75B

Date Sampled:08/25/2016 1612

Date Received: 08/26/2016

Laboratory ID: RH26003-030

Matrix: Solid

% Solids: 86.4 08/26/2016 2125

Run	Prep Method	Cleanup	Analytical Method	Dilution	Analysis Date Analyst	Prep Date Ba	tch
1	3546	3660B/3665A	8082A	10	09/07/2016 1454 MEM	09/02/2016 1925 212	292

Parameter		CAS Number	Analytical Method	Result Q	PQL	Units	Run
Aroclor 1016		12674-11-2	8082A	ND	120	ug/kg	1
Arador 1221		11104-28-2	8082A	ND	120	ug/kg	1
Aroclor 1232		- 11141-16-5	8082A	ND	120	ug/kg	1
Aroclor 1242		53469-21-9	8082A	ND	120	ug/kg	1
Aroclor 1248		12672-29-6	8082A	610	120	ug/kg	1
Aroclor 1254		11097-69-1	8082A	1800	120	ug/kg	1
Araclar 1260		11096-82-5	8082A	ND	120	ug/kg	1
Surrogate	Q 9	Run 1 Accept Recovery Lin	ance inits				
Decachlorobiphenyl		97 41-1	32				
Tetrachloro-m-xylene		87 35-1	06				

PQL - Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range H = Out of holding time

" " = Not detected at or above the PQL

J = Estimated result < PQL and > MOL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

re applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client:synTerra

Description: BL-SS-75C

Date Sampled:08/25/2016 1612

Date Received: 08/26/2016

Laboratory ID:RH26003-031

Matrix: Solid

% Solids: 87.9 08/26/2016 2125

Run Prep Method 1

Tetrachloro-m-xylene

3546 3660B/3665A

8082A 1

75

Cleanup Analytical Method Dilution Analysis Date Analyst Prep Date

Batch 09/07/2016 1507 MEM 09/02/2016 1925 21292

Parameter		CAS Number	Analytical Method	Result Q	PQL	Units	Run
Aroclor 1016		12674-11-2	8082A	ND	11	ug/kg	1
Aroclor 1221	1	11104-28-2	8082A	ND	11	ug/kg	1
Aroclor 1232		11141-16-5	8082A	ND	11	ug/kg	1
Aroclor 1242		53469-21-9	8082A	ND	11	ug/kg	1
Aroclor 1248		12672-29-6	8082A	ND	11	ug/kg	1
Aroclor 1254		11097-69-1	8082A	88	11	ug/kg	1
Aroclor 1260		11096-82-5	80B2A	ND	11	ug/kg	1
Surrogate		Run 1 Accept Q % Recovery Lin					
Decachlorobiphenyl		73 41-1	32				

35-106

H = Detected in the method blank

E = Quantitation of compound exceeded the exiltration range

H = Out of holding time

POI = Practical quantitation limit ND = Not delected at or above the FQL

J = Estimated result < PQL and ≥ MDL

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client:synTerra

Description: BL-SS-75D

Laboratory ID: RH26003-032

Matrix: Solid

% Solids: 90.0 08/26/2016 2125

Date Sampled:08/25/2016 1622

Dato Received: 08/26/2016

Run	Prop Method	Cleanup Analy	tical Method	Dilution	Analysis Data Analyst	Prep Date	Batch
1	3546	3660B/3665A	8082A	10	09/07/2016 1520 MEM	09/02/2016 1925	21292

. 5545 5565555555	0002A 10 03/01/	EUTO TOLE WILLIA				
Parameter	CAS Number	Analytical Method	Result Q	PQL	Units	Run
Aroclor 1016	12674-11-2	8082A	ND	110	ug/kg	1
Aroclor 1221	11104-28-2	6082A	ND	110	ug/kg	1
Aroclor 1232	11141-16-5	8082A	ND	110	ug/kg	1
Aroclor 1242	53469-21-9	8082A	ND	110	ug/kg	1
Aroclor 1248	12672-29-6	8082A	410	110	ug/kg	1
Aroclor 1254	11097-69-1	8082A	610	110	ug/kg	1
Arodor 1260	11096-82-5	8082A	ND	110	ug/kg	1
Surrogate	Run 1 Accepts Q % Recovery Lim					
Decachlorobiphenyl	84 . 41-1	32				
Tetrachloro-m-xylene	87 35-10	06				

PQL = Practical quantitation limit

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range H = Out of holding time

" = Not detected at or above the PQL

 $J = Estimated result < PQL \ and \ge MDL \qquad P = The RPD \ between two GC \ columns \ exceeds \ 40\%$ 

N = Recovery is out of criteria

re applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"



September 16, 2016

(b)(6) Personal 228 Pecan Drive Cheraw, SC 29520

Dear (b)(6)

Thank you for allowing the Department to collect soil samples in your yard. During the week of August 22, 2016, we collected samples of the soil near the drainage ditch in your backyard. The samples were collected from ground surface to a depth of 2". The samples were tested to determine the levels of polychlorinated biphenyls (PCBs) that may be in the soil.

The table below contains the results of the samples taken on your property. The screening value for PCBs is 1,000 micrograms/kilogram (ug/kg). We use screening values to determine where additional evaluation is needed. Sample locations with PCB results above 1,000 ug/kg require further investigation.

Sample ID	Contaminant	Sample Result (ug/kg)	
BL-SS-73	Total PCBs	2,400	

Based on the results, DHEC has determined that additional sampling is needed to determine the extent of this contamination. We will be in your area the week of September 19, 2016, to collect additional samples and distribute information.

Additional information will be shared with you as we continue to investigate this area. As a precautionary measure, DHEC recommends the following safeguards for your family:

- Stay out of the drainage ditch and do not let children or animals play in your backyard near the drainage ditch
- · Wash your hands before eating, sleeping or caring for children
- · Wash your hands after playing or working in the yard
- · Don't let children eat dirt
- Limit the amount of dust entering your home by using a doormat to wipe feet before entering
- Wipe off window sills, table tops and other surfaces that children can reach or that are used for eating
- When mowing the lawn, avoid running the mower over patches of dirt or wet down dirt areas prior to mowing. Avoid mowing the area next to the drainage ditch.

Until we confirm that the levels of PCBs in the soil are below the screening level, DHEC recommends that you avoid the area near the drainage ditch in your backyard and minimize the amount of dust and dirt entering your home.

If you have any questions regarding the attached map or information, please give me a call at (803) 898-0816.

Sincerely,

Judy Canova, Project Manager State Remediation Section

Cc: Buck Graham

Donna Moye

File



#### FORMER BURLINGTON INDUSTRIES SITE

The South Carolina Department of Health and Environmental Control (SC DHEC) is conducting soil and sediment sampling in your community. We have found contamination that is very likely the result of historical practices of waste removal from industrial processes prior to the existence of environmental regulations. This DHEC investigation is attempting to determine who may have been responsible for the contamination as well as the best way to address it and develop a clean-up plan.

We have the results of a first round of sampling and are in the process of collecting additional samples so that we can better understand the locations affected. Preliminary data has found elevated concentrations of polychlorinated biphenyls (PCBs) as well as some pesticides that are above the EPA's Residential Regional Screening Levels between Pecan Drive and the former Burlington Industries facility. We use screening values to determine if or where additional evaluation is needed.

When we are investigating areas of historical environmental contamination, we make recommendations to citizens about things that you can do to prevent potential future exposure(s). As a precautionary measure, if you live along the side of Pecan Drive or Robinhood Drive that backs up to the ditch, DHEC recommends the following safeguards for your family:

- Do not walk in the drainage ditch behind the houses on Pecan Drive and the houses on Robinhood Drive or let children or pets play in back yards near the drainage ditch.
- Wash your hands before eating or sleeping, or caring for children.
- · Wash your hands after playing or working in the yard.
- · Don't let children eat dirt.
- Limit the amount of dust entering your home by using a doormat to wipe feet before entering.
- When mowing the lawn, avoid running the mower over patches of dirt or, alternatively, wet down dirt areas prior to mowing. Avoid mowing the area next to the drainage ditch.

DHEC is still in the investigation phase and will be conducting additional sampling in your area the week of September 19<sup>th</sup>, 2016. Additional information will be shared with you as we continue our investigation. Once we have the results of this next round of sampling, a community meeting will be scheduled to discuss the results as well as the next steps. If your yard has been sampled or is sampled in the future, you will receive the results as soon as they are available.

#### Polychlorinated Biphenyls (PCBs) Information Sheet

#### What are PCB's?

PCB stands for polychlorinated biphenyls. This is not one chemical, but a class made up of 209 chemicals. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. PCBs have no known taste or smell. PCBs were used in manufacturing processes from 1929 until they were banned in 1979.

#### How were PCBs used?

Historically, PCBs were used as coolants and lubricants in transformers, capacitors and other electrical equipment because they are good insulators and don't burn. PCBs were also historically used as fluids in old florescent lighting fixtures and electrical transformers, as well as in products like cutting oils, hydraulic oils, and carbonless copy paper.

In 1979, the United States banned the manufacture of PCBs because they were found to be harmful to people and the environment. However, once PCBs are in the environment, they do not break down easily and may remain where they were released for very long periods of time.

#### Where are PCBs found today?

Because PCBs were used for so long prior to being regulated, low levels are found throughout the environment; typically in soils and in sediments in streams, rivers or ponds. They are sometimes found at higher levels in areas where they were disposed of prior to environmental regulations or where they have been illegally dumped.

#### How can PCBs harm me and my family?

In this situation of historical contamination, PCBs are primarily a hazard through skin contact. The precautions found on the other side of this page are ways you can reduce your potential for exposure to these chemicals. The most common health effects from exposure to PCBs is from workplace exposure (mostly historical) to the liquid oils through contact with the skin. PCBs are associated with skin rashes and a specific type of acne. Workplace exposures have also been associated with changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects.

## Where can I find more information about PCBs?

For additional information about PCBs, potential health effects, clean-up and disposal of waste, please visit the U. S. Environmental Protection Agency's website at <a href="https://www.epa.gov/PCBs">www.epa.gov/PCBs</a>.

If you would like additional information about the hazards of PCB's, please refer to the full ToxFAQ sheet produced by the Centers for Disease Control and Prevention's Agency for Toxic Substances and Disease Registry located: <a href="http://www.atsdr.cdc.gov/toxfags/tfacts17.pdf">http://www.atsdr.cdc.gov/toxfags/tfacts17.pdf</a>

Client: synTerra

Description: BL-SS-73

Date Sampled:08/25/2016 1120

Date Received: 08/26/2016

Laboratory ID: RH26003-008

Matrix: Solid

% Solids: 85.4 08/26/2016 2125

Run	Prep Method	Cleanup	Analytical Method	Dilution	Analysis Date Analyst	Prep Date Ba	tch
1	3546	3660B/3665A	8082A	10	09/02/2016 2152 MEM	09/02/2016 1100 212	229

200							
Parameter		CAS Number	Analytical Method	Result Q	PQL	Units	Run
Aroclor 1016		12674-11-2	8082A	ND	110	ug/kg	1
Arodor 1221		11104-28-2	8082A	ND	. 110	ug/kg	1
Aradior 1232		11141-16-5	8082A	ND	110	ug/kg	1
Arocler 1242		53469-21-9	8082A	ND	110	ug/kg	1
Aroclor 1248		12672-29-6	8082A	ND	110	ug/kg	1
Aroclor 1254		11097-69-1	8082A	2400	110	ug/kg	1
Aroclor 1260		11096-82-5	8082A	ND	110	ug/kg	1
Surrogate		un 1 Accepta					
Decarblombiobors	ul .	R4 44 44	22			-	

Surrogate	Q	% Recovery	Limits
Decachlorobiphenyl .		61	41-132
Tetrachloro-m-xylene		64	35-106

Not detected at or above the PQL

 $J = Estimated result < PQL and <math>\geq MDL$ 

P = The RPD between two GC columns exceeds 40%

# ATTACHMENT D

# ALSTON&BIRD II.P

One Atlantic Center 1201 West Peachtree Street Atlanta, GA 30309-3424

> 404-881-7000 Fax: 404-253-8424 www.alston.com

Douglas S. Arnold

Direct Dial: 404-881-7637

Email: Doug. Arnold@alston.com

October 6, 2016

#### VIA EMAIL

Mr. Ethan R. Ware Williams Mullen 1441 Main Street, Suite 1250 Columbia, SC 29201 Phone: 803.567.4610 eware@williamsmullin.com

Re:

Highland Industries Facilities Site Chesterfield County, South Carolina

#### Dear Ethan:

We represent BGF Industries, Inc. I am traveling this week, but have received a copy of your October 4th letter regarding the above-referenced matter. I have not yet had an opportunity to review the almost 200 pages of exhibits that accompanied your letter, but understand that your client, Highland Industries, is scheduled to meet on October 13<sup>th</sup> with the South Carolina Department of Health and Environmental Control. Based on the information presented in your letter, it does not seem necessary or appropriate for BGF to attend that meeting. However, when I am back in the office next week, I would be glad to discuss this matter with you. Also, I would appreciate it if you would send all further communications to my attention.

Doug S. Arnold

Sincerely,

# ATTACHMENT E

## WILLIAMS MULLEN

Ethan R. Ware Direct Dial. 803.567,4610 eware@williamsmullen.com

#### SETTLEMENT DISCUSSIONS ONLY NOT ADMISSABLE UNDER FRE 408

December 2, 2016

VIA Electronic and U.S. MAIL
Mr. Douglas S. Arnold
Alston & Bird, LLP
One Atlantic Center
1201 West Peachtree Street
Atlanta, GA 30309-3424
Doug.Arnold@alston.com

Re. Former Burlington PCB Site

650 Chesterfield Highway Cheraw, South Carolina Chesterfield County

Dear Doug:

We are writing you to update BGF Industries, Inc. ("BGF") on efforts by Highland Industries, Inc. ("Highland") to work with EPA, Region 4, and address the release of PCBs from the Burlington Industries, Inc. ("Burlington") business unit purchased by BGF. We realize BGF may elect to not voluntarily participate with Highland in a removal action, but Highland intends to extend to BGF every opportunity to do so.

Since our prior letter, EPA intensified investigation into the former Burlington PCB site in Cheraw, South Carolina. Highland recently met with both DHEC and EPA to discuss the response action and related information regarding release of PCBs and pesticides at the former Burlington plant site. [See attached Agendas for DHEC Meeting (Oct. 13, 2016) and EPA Meeting (Nov. 21, 2016)]. During the EPA meeting, the United States stated it is in the process of writing an Enforcement Action Memorandum to support a Time Critical Removal Action (TCRA) and Request for Funding relating the Site; a potentially responsible party ("PRP") search is underway. EPA indicated the Agency wishes to begin a TCRA within the next 30-60 days, including but not limited to removal and disposal of soils from residences, the Western Ditch, and nearby park. EPA and DHEC intend to fund these immediate response actions, if Burlington, related entities, and/or Highland are not willing to meet or unable to participate in discussions on the Site.

As part of a 104(e) Request for Information, DHEC and EPA asked about other PRPs for the Site including Burlington, BGF, and International Textile Group, Inc. (ITG). BGF and ITG may be successors in interest to Burlington. Burlington and associated entities filed for Chapter 11 Bankruptcy protection in 2001 and a Joint First Amended Plan of Reorganization was confirmed by the bankruptcy court in 2003 ("Confirmed Plan"). According to public records, W.L. Ross & Co., Inc./W.L. Ross Burlington Finance Acquisition, LLC ("WLR") purchased the stock of Burlington and other associated entities ("Debtors") and formed ITG as part of the reorganization. It also appears the Confirmed Plan may not discharge liability of the Debtors or

Page 2

#### SETTLEMENT DISCUSSIONS ONLY NOT ADMISSIBLE UNDER FRE 408

Reorganized Debtor relating to the cleanup of property contaminated by the release of hazardous substances at properties discovered after the Effective Date.

In the interest of responding to the proposed EPA removal action, Highland is hosting a meeting December 13, 2016, at the Highland facility in Cheraw, South Carolina, at 10:00 A.M. Invitations are extended to Burlington, ITG, and BGF. We will present information received from the State of South Carolina and the United States on the scope of PCB impacts, expected removal action, and estimated costs. Let us know by December 7, 2016, if BGF will attend.

Feel free to call if you have any questions. We look forward to seeing you December 13, 2016, at 10:00 A.M.

Sincerely,

WILLIAMS MULLEN

Ethan R. Ware

ERW:kc Enclosure

#### AGENDA

Meeting South Carolina Department Health & Environmental Control and Highland Industries, Inc.

October 13, 2016 2:00 pm 2600 Bull Street Columbia, SC 29206

Burlington PCB Site

- I. Introduction
  - Felix Nchako, PG
  - · Pete Evenson, Esquire
  - · Eric Laptook, Esquire
- II. DHEC Phase II Investigation Report
  - Residential Properties
  - · Huckleberry Creek
  - Public Park
  - Pee Dee River
- III. DHEC Phase II Public Outreach
  - Public Park
  - · Huckleberry Creek
  - Pee Dee River
  - · Public Meeting
- IV. CERCLA Process
  - EPA Participation
  - Notice of Liability: PRPs other than Highland Industries, Inc.
  - · Successor Liability: BGF Industries, Inc.
  - · Request to Participate: BGF Industries, Inc.
- V. Adjourn

#### AGENDA

# Meeting with U.S. Environmental Protection Agency Region 4 Atlanta, Georgia

November 21, 2016 10:00 am

# Glass Fabrics Former Burlington Glass Fabrics Site, Cheraw SC ("BGF Site")

#### I. Introduction

## Highland Industries, Inc.

David Jackson
 President and CEO

- Cheryl Malloy Vice President
- Evans Tindal Plant Manager

#### TK Holdings, LLC

 Eric Laptook, Esquire General Counsel

# Corporate Counsel

 Pete Evenson, Esquire Tuggle Duggins

#### **Environmental Counsel**

Ethan Ware, Esquire
 Jessie King, Esquire
 Williams Mullen

#### II. Relevant History

1961-1980:

1970:

Construction of facility by Burlington Industries, Inc. (BII)

Burlington Glass Fabrics Division ("BGF Division")
 (Dyeing/Finishing decorative and industrial fiberglass) -- Owner/Operator

liberglass) -- Owner/Operator

1961-1970: Wastewater discharge to Western Ditch

Pretreatment unknown

PCB present as impurity in pigment and latex finishes used in textiles

illisties used in textiles

Wastewater Treatment Tank

• Simple gravity settlement

1972 -1980: Wastewater discharge to POTW:

Sludge drying beds

1980-1981: BGF Division

Commence phase-out of fiberglass process

January 1, 1982: Use of PCB in fiberglass phase-out complete

EPA ban effective

1980-1983: Burlington Industries Fabrics Company (BIFCO), Division

of BII, startup at BGF Site.

· Non-fiberglass synthetic fabrics only

No pigments used

1988: BGF Industries, Inc. ("BGF")

Purchased BGF Division

Moved BGF Division "business" to BGF Industries,

Inc. Altavista, Virginia plant

o BGF Altavista is PCB site

1988: Highland Industries, Inc.

· Purchased BIFCO and plant site

Industrial non-fiberglass fabrics only

No use of PCB

# III. Non-Participating Potentially Responsible Parties (PRP)

- BGF Industries, Inc.: Owner and Operator of BGF "Business"
  - a. Declined invitation to discuss allocation
    - Refused invitation to meet with the State
    - Did not respond to invitation to attend public meeting
  - b. Successor in Interest to BGF Division of Burlington
    - Operated at BGF Site during use of PCB in textiles
- 2. BII: Owner and operator of BGF Site at time of release of PCB
  - Bankruptcy filed in 2001
    - Confirmation Order and Amended Plan of Reorganization
  - Successor to BII International Textile Group, Inc. (ITG)
    - Acquisition Agreement in Bankruptcy modified as stock purchase
    - Major assets/continuity of business
    - Is the Reorganized Debtor Release of PCBs at Site arguably not discharged in bankruptcy per Confirmation Order

# IV. Requested Action

- Step No. 1. Send Notices of Liability to BII and ITG;
- Step No. 2. Allow all PRPs opportunity to participate by 107 Consent Order;
- Step No. 3. If 107 Order refused, issue to BGF and/or ITG Unilateral Administrative Order (UAO) for work not completed by Highland under 107 Consent Order (to be determined).